

Beyond the rhetoric of "post-war miracle" and "rising yen", how is JAPAN to sustain its growth into a new economic and technological generation? Jon Turney reports on the new policy of strengthening fundamental science and on the country's careful balancing of native and "western" traditions (page 12)

Does MEDICINE fit into any accepted "Robbins" or "Rothschild" view of academic teaching research? C. L. Berry looks at the special problems of the medical schools and departments (page 14)



The "Vietnam" that tops the pop charts is exclusively an American affair. Dennis Duncanson focuses instead on the peoples of INDOCHINA and on the war's implications for them (page 15)

In party mood: in the next of four series on libraries and research projects, Davina Chaplin and Ronald Ferguson look at the collection of European POLITICAL PROPAGANDA at Lancaster (page 17)

Home news	1-8
Letters to the editor	2
Don's Diary (Dennis Kavanagh)	4
antithesis	6
Union View (NUS)	7
Overseas news	9-10
Articles	11-17
Column (Bernard Crick)	18
Books	18-27
American studies books	24-27
Noticeboard	28
Classified advertising	29-39

NEXT WEEK

Lawrence Freedman on British Intelligence
Economics books
Alan Bullock asks: Is history still relevant?
UGC planning for the late 1980s

© TIMES NEWSPAPERS LIMITED, 1985
Published by Times Newspapers Ltd., P.O. Box 7, 21, Gray's Inn, London EC1A 3JE.
Typesetting by Computer Graphics Ltd., 37-41, Camden Way, London EC1A 1BB.
Printed by the Press Office, ISSN 0143-3825



HIGHER EDUCATION SUPPLEMENT
Priority House, St John's Lane, London EC1M 4BX. Telephone 01-253 3000

Questions and answers

The University Grants Committee behaves more like the National Advisory Body every day; this may be the wry conclusion reached by many who read the latest circular letter from the committee entitled "Planning for the late 1980s" which was sent to universities last week. For this 35-paragraph letter with three elaborate annexes gives the strong impression of an ambition to regulate the universities in a detailed manner all too similar to the solidly bureaucratic relationship between the NAB and the polytechnics and colleges. Here surely in these pages is a triumphal dirge.

Of course this impression, even if accurate, is not sufficient to condemn the latest of the quick-fire initiatives taken by the UGC since Sir Peter Swinnerton-Dyer became chairman two years ago. Clearly the planning of higher education in the future will depend less and less on implicit assumptions and gentlemen's understandings and more and more on explicit statements and detailed paperwork. The growing complexity of the system with its often discordant interests, the increasing competition for resources under an inevitable regime of "sloping funding" which has so dramatically eroded the former solidarity and trust between disciplines and institutions (if never between sectors), the urgent need for higher education to claw its way back up the steep ladder of priorities for public expenditure, all are powerful imperatives that dictate a more determined and more professional approach to planning from which the universities cannot be exempted.

Nevertheless the UGC's latest initiative is open to two criticisms. The first is that neither the universities nor the committee have the means to cope defensibly with the process of information gathering and policy formation laid down in the circular. The second is that there seems to be insufficient coordination between different UGC policies, on the arts/science split, on small departments, on research selectivity and so on. It seems to be assumed that the natural outcomes of these different policies can easily be made compatible.

The form of what the UGC is now proposing could be described as a rerun of last year's "great debate" but this time real and for many painful decisions will be taken at the end of the process, rather than simply an accumulation of university hopes and fears to present to the Government as persuasive propaganda. This new exercise is executive rather than aspirational, a big difference. It means that the defects and shortcomings apparent last year which could safely be overlooked because no life-or-death decisions were at stake cannot so easily be dismissed this time round.

Yet the universities are being asked

for even more complex information and within a shorter time, allowing for the summer vacation. On research, which is covered in the circular's first annex, they have to answer 16 questions, some good for many hours of debate in senates, and the UGC is seeking information on up to 37 separate departmental headings. Few universities will have all 37 but most will probably have considerably more than 20. On student numbers (annex two) and financial forecasts (annex three), universities are being asked to fill in 12 highly detailed tables, much of the necessary material being speculative and therefore controversial.

The doubts arise about both ends of the operation. Maybe the streamlined university managements of the Jarratt committee's dreams could produce coherent replies to this barrage of requests for information, just about. But it is difficult to imagine how the average council and senate will be able to fulfil this complex planning operation in the time allowed by the UGC. Nor is it at all clear how the UGC will be able to absorb let alone process sensibly the mass of information it will receive over the next six months. To imagine that the new post "on the financial side", mentioned in the circular, can make any serious contribution to climbing this administrative mountain is utterly naive.

In any case any extra administrative help acquired by the UGC would mainly be applied to issues of student numbers and finance. On the all-important research policy there is still no clear indication of how the UGC will go about its business. The suggestion in the circular seems to be that the subject subcommittees can work with the mass of undigested material that will flood in from the universities. But however heroic the efforts of the members of these subcommittees, and however untiring the chairman in his individual struggle to produce a coherent policy, there can be no realistic hope that the UGC can develop a defensible research policy under such anxious conditions. The fear will inevitably be that the good old "informed prejudice" buttressed by the raiding of supportive evidence from the mountain of undigested university responses.

This would be a sad outcome. Nothing would do more to set back the cause of more purposeful planning in universities than a painful demonstration of the sclerosis of centralization. The most urgent priority therefore must be to reconstruct the UGC as an effective planning body. Part of this being given sufficient and appropriate staff to take on this new and ambitious role. But another part will require root-and-branch review of the founding principles of the UGC.

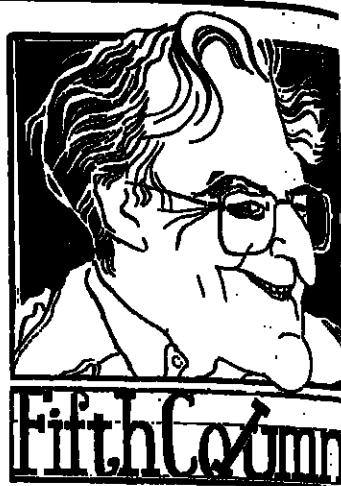
The second criticism is that the UGC's various initiatives do not appear to be well coordinated. This fear is less serious than the inability of the UGC to cope sensibly with the information it has asked universities to provide, but it is still worth registering. At times the committee's initiatives seem to resemble a series of stones that Sir Peter has thrown into a (stagnant?) pool leaving their successive ripples to cross-cross in an unpredictable but exciting way.

For instance, on small departments the UGC seems to be adopting a largely laissez-faire attitude, although future guidance has been promised. The committee seems for the moment to be content that departments and universities should get together to work out sensible bilateral arrangements for rationalization. The difficulty is not only that such bilateral discussions tend to go well in the exploratory stage but slow to a crawl as the point approaches where resources and responsibilities have to be transferred; they may also conflict with other UGC initiatives.

What happens if bilateral arrangements leave a university with an even more pronounced arts bias, a fairly likely outcome as strong arts departments are often found in universities with a greater than average stake and reputation in arts and many small departments are likely to be in arts subjects? Or alternatively if they conflict with the considered judgements of the UGC about the best research departments under the terms of its developing selectivity policy?

No university is likely to wish recklessly to offend the UGC by undermining the committee's overall policy on the arts/science balance; nor to shift its centre of gravity too far towards the "soft", unpopular arts. Neither can the UGC itself logically tolerate a situation in which piecemeal rationalization leads to "strong" research departments being swallowed up by "weak" ones. Sir Peter seems to be hoping that it will all come together on the night, or at any rate that the mismatches between the outcomes of his various initiatives will not be too serious. He may be lucky but success is hardly guaranteed.

Maybe the UGC has got it the wrong way round. It appears to some to be plunging headlong into detailed tactical planning without adequate preparation or the effective means to fulfil its ambitions, while neglecting the strategic planning that provides the necessary context for its more detailed initiatives. Yet it is the latter that British universities, and British higher education, so badly need; there is no lack of detailed madders. Nor should the UGC behave like the NAB. The planning environments on opposite sides of the binary line remain quite distinct.



Fifth Column

My 16-year-old daughter having suggested to me with some acid in her voice that it is about time I wrote a column about the fact that people are not always what they seem from appearances. I have been wondering what was on her mind. After all, I have always known that people are not all that they seem, a recognition that I have assumed to be one of the principal if not the only lessons to be learned from a university education.

What was on her mind was this. A few weeks ago I gave my tickets for an orchestral concert in Leeds Town Hall to her and a boy friend. Because of certain physical disability, I reserve for part of the season two seats at the front and in the middle, under the conductor and close enough to the orchestra to exchange glances of appreciation or the opposite from time to time. My daughter and her friend took the seats and enjoyed the concert. It was the BBC Philharmonic Orchestra playing some Berlioz, Strauss and Shostakovich. Undoubtedly high class stuff.

The point of the story is that, in addition to what seem to me strange clothes, my daughter's hair style gives her a high central crest of bleached white hair, with yellow slides, short black hair above the ears and sometimes a section of blue on the back. Her friend looks no dissimilar. His Mohican crest is higher and shiner and seems to flare out at the top. He wears a black flat cap and narrow black trousers. He also wears a leather collar studded with metal nodules, ankle chains above pointed boots, wrist bands and heavily studded belt to match and a cascade of diamond jewellery.

What offended my daughter was that the orchestra couldn't keep their eyes off her. The conductor staggered visibly when he took his bow; the cellists and violas kept looking up and sideways from their scores. I am not sure if they kept on playing wrong notes; but whenever there were a few bars of rest, the players stared fixedly at the front row of the audience.

Well, it was absolutely absurd, said my daughter. Anyone would think they had never seen a punk or a Mohican before. I had a good mind to go up to them and say, what's the matter with you, and anyway my father is the director of a polytechnic and my friend is about to go to Oxford University so don't imagine we're just a couple of ignorant louts after all you are dressed up in old black suits and dresses looking a lot more absurd than we do.

She didn't say that as far as I know. At the least she must have looked grand in Leeds Town Hall, which since its restoration a few years ago is the most colourful and glittering interior you can imagine, looking a little lighter and just as gorgeous as it did when Queen Victoria opened it in September 1858. But it cannot be right to distract players from their music.

If they had all had a university education they would, I must assume, know that people are not always what they seem. But the problem does seem to run in the family. When he went to a concert my father also liked to sit in the front row. Because his hearing was rather poor, he liked to insert earplugs into his ears before the orchestra started; it improved the sound, he said. He never understood the look of hopelessness resignation he got from the conductor as he put them in.

Patrick Nuttgens

The Times Higher Education Supplement

May 24, 1985 No 655 Price 60p



Peter Brooke 'rolls the wicket for rationalization' at the press conference to launch the Green Paper

Government stands firm on 'value for money'

by John O'Leary

His proposals for the rationalization of higher education will be produced within 18 months, when the Government has taken stock of reaction to this week's Green Paper.

Initial reaction both in Parliament and in higher education was almost universally hostile as the Government decided on its plans for a smaller system more closely geared to the needs of the economy.

Mr Peter Brooke, under secretary for higher education, described the Green Paper as "rolling the wicket for rationalization" and promised a clearer statement of the Government's intentions before the end of 1986. He confirmed that university closures were possible, but did not expect any to be ordered in the current decade.

The paper itself warns that planning for the amalgamation or closure of institutions should begin soon, in anticipation of a fall in student numbers during the 1990s. It calls for much closer collaboration between higher education and industry and confirms the Government's policy of concentrating resources on science and technology, with consequent cuts in non-technical courses.

Sir Keith Joseph, introducing the paper in the House of Commons, said that the time of the Robbins report had been reassessed but higher education now had to contribute more effectively

to the economy. The Government was committed to raising standards and achieving value for money.

He assured MPs that, although future policy was based on the lower of the Government's two projections of student demand, he would be glad to revise plans if more suitable applicants came forward.

Mr Giles Radice, Labour's chief spokesman on education, described the paper as a miserable flop, with few new ideas and totally lacking in vision. It was irresponsibly evasive about resources, he added.

"It will not provide wider educational opportunities or supply the highly skilled graduates that we require. It will fail to meet the research requirements of industry. In short, it is a recipe for national decline," he said.

Few MPs were supportive of the Government's approach. Mr Robert Rhodes James, the Conservative liaison officer on higher education, said a policy of contraction could not be accepted.

The Alliance was equally critical. Mr Clement Freud, the Liberal spokesman, said the paper marked a change from the unacceptable to the intolerable, while Mr Mike Hancock, for the Social Democratic Party, described it as a betrayal of the principle of education.

Mr Maurice Shock, chairman of the Committee of Vice Chancellors and

Principals, said the Green Paper was a deeply disappointing document. "Clearly the Government has learned little or nothing from the consultations of the past two years," he said, adding that the policies for finance and student numbers were incompatible with the emphasis on excellence.

Mr John Bevan, secretary of the National Advisory Body, welcomed the acceptance of a revised Robbins Principle to guide access to higher education and the recognition of the importance of continuing education.

But he accused the Government of failing to understand the issues involved in access to courses. The Association of University Teachers and the National Association of Teachers in Further and Higher Education said that the paper demonstrated an utter inability to generate creative, rather than destructive policies for higher education. And Mr Phil Woolas, president of the National Union of Students, accused Sir Keith of playing into the hands of the ultra left in his attacks on student unions. "If he tries to legislate, student unions and NUS will have nothing to lose. We will disrupt everything we can," he said.

Sir Keith will address a conference on the Green Paper, which is being organized jointly by the Society for Research into Higher Education and The THES.

Leader, back page



The Development of Higher Education into the 1990s

The Green Paper's main points include:

- likely amalgamation or closure of institutions as student numbers fall in the 1990s;
- loss of research funding for departments or even entire universities;
- action to ensure freedom of speech on campuses;
- consultation on differential pay to reward outstanding academics and those in shortage subjects;
- approval for experimental two-year degrees for high fliers but no extension of general two-year qualifications;
- revision of the Robbins Principle to substitute ability to benefit for formal qualifications, subject to cost;
- An independent review of the UGC, but a rejection of a single planning body.

Details, page 8 and 9

£1,000 funding gap revealed

The full extent of the gap in funding between universities and the public sector was revealed this week in a new study by the Department of Education and Science.

Its contents, following immediately on the Green Paper's rejection of a common unit of resource for teaching throughout higher education, will provide new ammunition for the Government's critics in polytechnics and colleges.

The new figures, produced in consultation with the University Grants Committee and the National Advisory Body, show funding per student plummeting in the public sector over the first half of the decade, while the university equivalent remained almost static.

In 1980/81, the local authority institutions are shown receiving £200 more per student than the universities after allowing for research. The voluntary and direct grant colleges are shown even further ahead, almost £1,000 per student better off than the universities.

But in the coming academic year, continued on page 3

Top firms promise to match Thatcher's £43m

by Jon Turney

Science Correspondent

Leading industrialists pledged to increase their support for technological higher education in a two-hour meeting with the Prime Minister on Tuesday, shortly before publication of the Green Paper calling for closer links between education and industry.

The meeting brought together 26 influential business figures with Mrs Thatcher, and ministers and officials from the education, industry, employment and Scottish departments as well as student and Scottish representatives. Many of the firms involved do some of these things already, but the Government expects a significant overall increase.

Hewlett-Packard UK, whose chairman Mr David Baldwin was at the Tuesday meeting, announced afterwards it would double its planned help for higher education to £1.5 million. Mr Baldwin said: "The Prime Minister and secretaries of state were intent on underlining the importance of the industrial contribution." His company was anxious to respond.

IBM UK has also just announced an addition to its current programme of donations, a plan to link five university

chemical engineering departments to an IBM-installed mainframe at Imperial College, London.

However, it still remains to be seen how many truly new initiatives emerge from the industry side in response to the Government's cash injection. The companies at the Downing Street meeting drew up a list of their existing help for higher education institutions beforehand, but not a list of new plans.

There is also a doubt about the role of the Information Technology Skills Agency set up by the Confederation of British Industry's education foundation and chaired by Sir Robert Clayton of OEC. The official view is that the agency will coordinate industrial links, but many companies may opt to do business for themselves.

The Government also announced that Sir Keith Joseph, Secretary of State for Education and Science, will hold detailed discussions with firms about their contributions, and their views on the selection of centres for Government aid. And there will be a second meeting with the Prime Minister to discuss progress in the field early in 1986, when the Government has designated 'Industry Year'.

Majority rejects strike call

by David Jobbins

Fewer than a half of the branches of the college lecturers' union voted to support their leaders' call for a one-day strike in support of their pay claim.

Of more than 300 results reported to national officials of the National Association of Teachers in Further and Higher Education, only 154 voted to for strike action to coincide with a series of rallies in provincial cities, while 157 voted against.

Notable leaders nevertheless regard the second wave of their industrial action as a success, with respectable turnouts at the rallies, which attracted more than 600 at Leeds last week and 1200 in London on Tuesday. The final rally was in Belfast on Wednesday.

However the outcome is in stark contrast with the strong support for the first wave of action which involved a withdrawal of goodwill, overtime ban and no cover for absent colleagues.

But it has become clear that many NAFHE members, while they support the overall campaign and their leaders' approach to the salary dispute, are not prepared to take action which would conspicuously lay them open to the charge of damaging students' interests at a critical point in the academic year.

Many of the "no" votes were decisive, and few of the ballot returns in favour of strikes were sufficiently high for the union to instruct its members to take action. Leaders had to be content with an authorization under union rules.

The union's conference this weekend in Plymouth will be asked by activists to step up industrial action this term, including a call for a refusal to disclose internal assessments, non-cooperation with fee collection and collation of educational statistics.

There is no apparent geographical pattern to the results, with colleges in the south appearing as determined as in those the north and Wales. But one factor could be an unwillingness to take strike action in areas where education authorities have declared their support for the teachers' case.

Labour and Liberal MPs have joined forces to support the university lecturers' demand for an independent inquiry into their salary erosion.

An early day motion tabled by Labour education spokesman Mr Giles Radice has attracted the signatures of 57 MPs - and Liberal chief whip Alan Beith has suggested that some Conservatives might be persuaded to add their names.

Letters to the editor

Dilemma of library costs

Sir, - Not often since the departure of Laurie Taylor have your columns given me cause for mirth; however, in your issue of May 10 the juxtaposition of two unrelated items on the front page raised a smile, albeit wry and somewhat faint. A member of the Committee of Vice Chancellors and Principals, commenting on the Jarratt report, says: "The work that matters is in the library and the laboratory..."; and my colleague Professor Lamb estimates that the costs of scientific research are rising at something like 5 per cent above the national rate of inflation.

The former statement may be a truism, and the latter a cause for concern; but would that the costs of university libraries were increasing at such a low rate! In my own university - despite a widespread determination to support the library as generously as other pressures permit - I can point to a decrease of about 10 per cent in purchasing power in each year since 1980/81; and the decline seems to be accelerating with the final abandonment of the Government's promise of

level funding once the 1981 round of cuts had been completed.

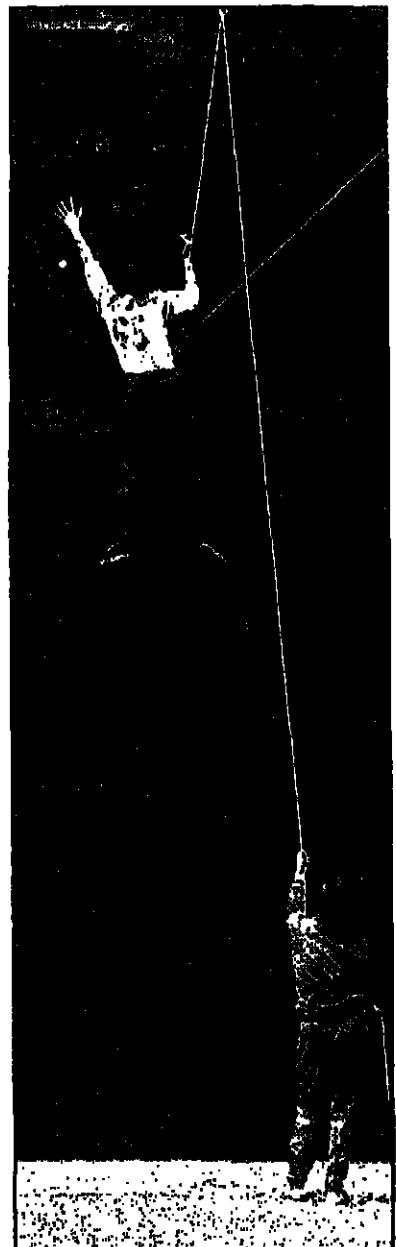
Moreover this is not merely a local problem: statistics of university library expenditure throughout the UK demonstrate that the St Andrews' experience is not atypical: national expenditure on books and periodicals is lagging far behind the (optimistic) inflation figures given in the CVCP's own *Index of University Costs*, to the current extent that an increase of 25 per cent (or £21 per student) would be needed in the current year merely to return to the 1980/81 level, which itself was not fully adequate for our real needs. The reason is simple: purchase costs regularly increase by more than 15 per cent annually, while disposable income may rise by 5 per cent if we are very lucky.

Quite clearly there is no immediate prospect of this kind of additional funding being generally provided; yet everyone from the University Grants Committee downwards continues to urge us to maintain library purchasing as the basic platform for teaching and research. We, as librarians responsible

for administering something like 4 per cent of our universities' budgets, are at least as highly conscious as any of our colleagues of the paramount need for cost-effectiveness: we have reduced our hours of opening, lengthened the queues at our issue desks, and generally eliminated every "luxury" which might conflict with the need to maintain our purchasing power at the highest possible level.

Yet we are still forced to embark on round after round of cancelling subscriptions to essential periodicals, and to see dozens of highly desirable monographs eluding us in every area of research because we cannot afford to buy them: does the Government really wish us to degenerate into third world libraries and, by extension, into third world universities? I cannot believe this to be true; yet it is the ineluctable consequence of continuing the course of action now being taken by our political and financial masters.

Yours faithfully,
A. GRAHAM MACKENZIE,
Librarian, University Library,
St Andrews.



High climb, low cost

Threat to local records

Sir, - It was encouraging to see "Danger to local records warning" in Peter Aspdon (*THE TIMES*, May 10). The Local Government Bill currently in the House of Lords does indeed threaten to cause a dislocation in the provision of archives services in metropolitan counties and the Greater London Council. It is to be hoped that further publicity will be given to the disruptive effect of the bill in these (and other) respects.

I believe, however, that what Mr Adrian Ailes (development officer of the Historical Association) is reported to have said could be slightly misinterpreted in one respect. "The last but not least government reorganization centralized all record offices within metropolitan counties, which made access easier and enabled fully-qualified and trained staff to look after them." Unfortunately, this statement has an implication, probably unintended, which is unfair to my colleagues in metropolitan district record offices who are "fully qualified and trained staff" and very good archivists. The question is not the quality of staff but the level of staffing.

The position of local authority record offices and archive services in metropolitan areas is a complex one and has a complicated background. The real debate is centred - as you report it - on the question of resources.

What is the lowest tier of local government at which record offices can be strategically and viably operated? Can districts (or even counties) - as you suggest - be expected to provide the proper level of resources for effective archives services, taking into account changes in information technology, techniques of conservation, capital expenditure on suitable storage conditions, and the level of staffing?

The preservation of metropolitan county record offices or county-wide archives services in metropolitan areas would certainly help to create the conditions in which better-resourced record offices could begin to flourish.

Even so, there is a wide difference in provision and resources in metropolitan counties, from no county service in the West Midlands through embryonic county services in South Yorkshire, Merseyside and Greater Manchester (the latter rapidly developing) to the excellent county-wide services in West Yorkshire and Tyne and Wear. Similarly, there is a wide disparity between county services in shire counties.

At the moment, the provision of local records services is basically dependent on permissive legislation by the Local Government (Records) Act 1962 with the amendment of the Local Government Act 1972 for metropolitan counties and the political will of local authority elected members. Consequently, we have this great unevenness of provision throughout the UK.

The Society of Archivists and the Association of County Archivists are very much concerned with evolving a National Archives Policy to provide greater uniformity and effectiveness of service, and the empathy and understanding of those in higher education would, I'm sure, be warmly appreciated.

Yours sincerely,
DAVID POSTLES,
Archivist,
Sheffield City Libraries.

Welsh wit

Sir, - I wonder what prompted Dr John Latham to write his amusing letter (*THE TIMES*, May 17). To the best of my knowledge, the religious services of this college (founded since 1980) never started its meetings with prayer. Discussion certainly took place from time to time, but the episode, invented by Dr Latham, is apocryphal.

Yours faithfully,
ALUN EVANS,
Assistant Registrar,
University College of Swansea.

Report clears FCS of extremist charges

by David Jobbins

A report on the events during the Federation of Conservative Students' conference in Loughborough is to clear the organization of charges of vandalism, political extremism and intolerance.

Mr Alan Howarth, MP for Stratford-upon-Avon and an FCS vice chairman, was asked to carry out the investigation in parallel with the inquiry ordered by FCS party chairman Mr John Selwyn Gummer.

Mr Gummer accused the FCS of unacceptable behaviour and suspended its grant pending the outcome of the inquiry. But Mr Howarth, who is in the final stages of assessing the evidence he has amassed, will say that the Press reports of vandalism and disruption were exaggerated.

Instead, any damage or mess was the result of the inability of a small number of guests at a party to hold their beer rather than some sinister political plot.

He will also conclude that although there are signs of aggressive factionalism with FCS, there is no evidence that any political gathering where differing views are deeply held. Nor is there evidence of intolerance, or flirtation with fascist regimes.

The official inquiry is due to report to senior members of the national union in the middle of June, and Mr Gummer

has said that individuals found culpable will be expelled.

But Mr Howarth, who will be submitting his report to the inquiry, said: "The party should have shoulders broad enough to shrug off a degree of political embarrassment arising from the ideological exuberance of some of its student members."

"FCS should not be judged by the extravagant and regrettable behaviour of a small number of its members."

£1m compensates for cuts and Harrington

by Karen Gold

A special £1 million grant is to go to the Polytechnic of North London to compensate for cuts in student numbers and an estimated £190,000 in legal costs because of the case of National Front student Patrick Harrington.

Directors of London's other four polytechnics have backed the Inner London Education Authority in giving the one-off £1 million to PNL as part of the authority's distribution of £11 million "topping up" for 1985/86.

The £11 million means a steady-state topping up, compared with predictions earlier this year the IEA would cut its higher education topping up by £7 million - around £1 million per polytechnic. Instead, the polys will have an income up by around 7 per cent on 1984/85, with another £800,000 the authority is keeping in reserve to pay for early retirements and voluntary redundancies.

Notices asking for volunteers for early retirement have already gone out at PNL, which will still be £660,000 worse off than this year after inflation is taken into account, according to an IEA spokesman.

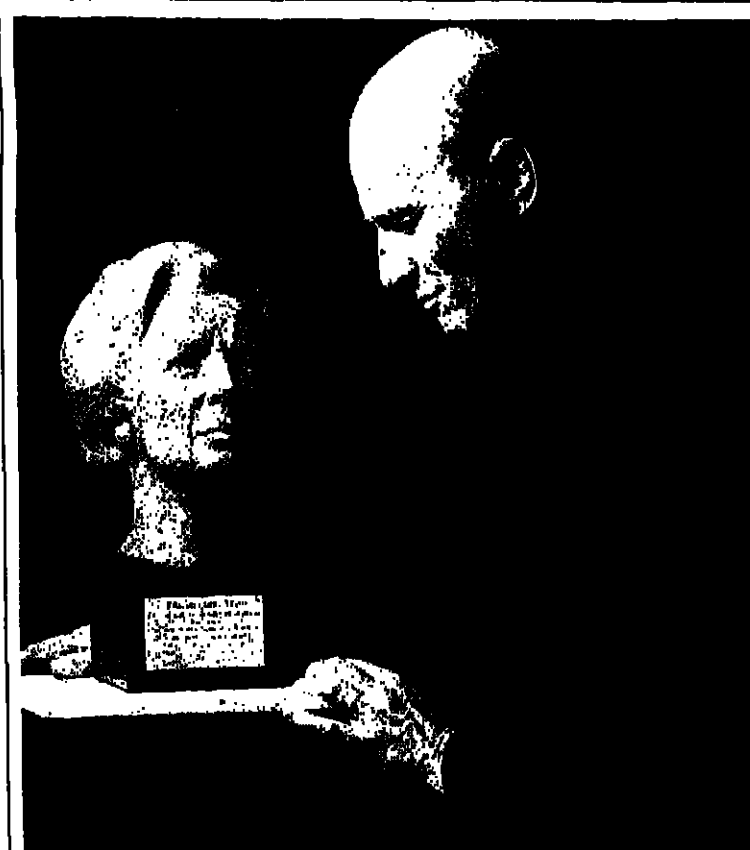
Had IEA not granted the special £1 million the polytechnic would have been over £1,500,000 worse off. According to IEA, this is partly due to the legal costs of the cases involving National Front philosophy student Patrick Harrington last year, which are estimated at between £150,000 and £190,000 with some of the bills still not in yet.

The other reason is the cuts in PNL student numbers in social science - PNL is particularly vulnerable to National Advisory Body plans to reduce social science and arts to make way for science and engineering - and the fact that PNL, unlike the other London polys, had not received NAB special research or biotechnology money. PNL's share of the advanced further education pool will increase only by 0.09 per cent in 1985/86 - a cut after inflation - compared with increases of 8.7 per cent for City of London and 9.8 per cent for South Bank polytechnics.

The distribution of £7 million of the IEA money will be on the points scheme awarding extra money for IEA residents, mature and part-time students and women introduced by the authority last year. The authority is pressing the polytechnics to find a method of ethnic monitoring so this factor can be included in subsequent years.

The authority found the extra money by drawing on its reserves, which are now very depleted, according to an IEA spokesman. The apparent steady state of the grant masked considerable changes in the way it was made up, in particular through the points system, he said.

The acting director of PNL, Dr John Beishon, said he expected to be able to make the necessary savings at the polytechnic through natural staff loss and the early retirement scheme. He did not expect PNL to need another special grant next year.



Getting ahead: Middlesex Polytechnic's Professor Neal French, head of the school of product design, shows off a terracotta head of the Prime Minister which he modelled as a commission for the chairman of the polytechnic's governors, Councillor Vic Usher. Councillor Usher presented the head to the London Borough of Barnet which contains Mrs Thatcher's Finchley constituency. Professor French spent more than four hours on four sittings with the Prime Minister at Downing Street.

Freedom of speech charter

Student and trade union leaders are close to agreement with other leading organizations in higher education on a charter for freedom of speech on university and college campuses.

The initiative is intended to unite students and lecturers with the University Grants Committee, the National Advisory Body, vice chancellors and polytechnic directors in a commitment to the principle of independent and democratic student unions. It comes from the National Union of Students, which fears increasing pressure on the autonomy of student unions.

The latest draft is being circulated this week, although it is understood that many of the organizations already approached are ready to ratify it. Mr Phil Woolas, president of NUS, had hoped that the charter would be ready in time to coincide with publication of the Green Paper, which was known to deal with the issue of political activity and free speech on campus.

But one of the factors in the delay has been the reservations of the teacher unions over a section of the charter dealing with politics in the lecture theatre.

An early draft referred to the need for students to take part in reasoned debate if their experience of higher education was to be complete. It then said that university polytechnic and college authorities and lecturers "cannot allow active politics into the lecture theatre".

In particular the National Association of Teachers in Further and Higher Education felt that this phrase was too restrictive, and that for a full curriculum it was impossible not to lecture on various ideologies.

The wording has now been refined to take account of this view, and the NUS aim to avoid students importing their political differences. It now reads: "Institutions and lecturers should not allow political activities to distort the learning and teaching process".

Cash pledge to preserve museum

The Government has guaranteed the future funding of the Manchester Museum, the only university museum in the country which relies on substantial local authority financing, after the proposed abolition of the Greater Manchester Council.

The GMC currently provides a grant of about £220,000 a year to the museum - roughly 42 per cent of its revenue spending - which the Government has promised to earmark for the three years following the council's abolition, via the University Grants Committee and Manchester University, which owns the museum.

But it has made no such guarantee on providing capital grants for special needs, which the GMC has also given to the museum, at an average annual rate of £50,000 for the last eight years.

The council has also given the museum up to £10,000 a year for its travelling exhibition scheme in the past - another factor for which the Government has not allowed in its proposals.

Mr Alan Warhurst, the director of the museum, said the additional sums provided by the council have proved indispensable in the last few years. "The revenue funding we receive just about keeps the museum running, but there is no money available for doing anything new or different," he said. "Without it, we shall just do nothing and remain very static."

But elsewhere, the Government move has been interpreted as a significant precedent. In his annual report, the director of Oxford's Ashmolean Museum, Sir David Piper, said: "This does at least and at last indicate that it is possible for government to provide an element of more or less direct funding to university museums to acknowledge their non-university responsibilities."

The Ashmolean had not succeeded in attracting any financial support from city or county authorities for the extra services provided.

Celestial myth

Sir, - The mistaken idea that astrology is about celestial influence is a perennial source of confusion. Scientists need not fear that correlations between cosmic and terrestrial events are astrological (*THE TIMES*, May 17), because what is established by scientific methods is science. Astrology has never been structured as an investigation into celestial influences: it is based on symbolic connections and occult prediction (hardly any astrological rules have stood up to statistical examination: G. Dean, *Recent advances in natal astrology*, 1977). In fact, astrologers have no need of true or consistent rules - their predictions (or other pronouncements) are all that matter to them and their clients.

Yours sincerely,
ANTHONY P. STONE,
186 Kennington Park Road,
London, SE11.

Power game

Sir, - I was gratified to note that you found occasion to print a photograph and short piece on the international simulation exercise involving students from Newcastle and Durham in a power politics game (*THE TIMES*, May 10). I should, however, like to make one correction. The language students involved were from New College Durham, and not from Durham University as you stated.

Yours faithfully,
P. CONNELL,
New College, Durham.

Professional Association of Teachers

99 Friar Gate, Derby DE1 1EZ
Tel: DERBY (0332) 372337

PAT provides professional and personal services for teachers in colleges of all disciplines by a fully qualified trade union.

PAT does not belong to the TUC, it is a combination of membership that empowers teachers to improve their professional image for the teaching profession.

We work for a high level of professional commitment: among teachers and lecturers; for the protection of their interests by the force of argument rather than the application of force; for the establishment of a genuinely professional image for the teaching profession.

Membership increased by over 25% in 1984. We continue to grow in all parts of the United Kingdom in 1985. We believe that the future of the profession lies in the direction we are taking.

If you want to consider joining us, write for more information to the following address (no stamp required):
Professional Association of Teachers, FREEPOST, Department NE, 99 Friar Gate, Derby, DE1 1EZ.

Investing abroad

Sir, - John O'Leary's analysis (*THE TIMES*, May 17) of the numbers of overseas students coming to the UK makes dispiriting reading. His reference to Government inaction set against the rhetoric of ministers is thrown into sharper relief in the area of promotion of British higher education abroad.

An "extra" sum of £100,000 was set aside as part of the (dare we say it?) Pym package for this purpose. The British Council grasped the nettle and started up the Education Counselling Service in Malaysia, Singapore and Hong Kong, doing many of the things the British Council should have been doing years ago anyway but, it has to be said, doing them very well. Institutions paid up to £5,000 apiece as the prime contributors to the service, with some assistance from the Pym money.

There is currently a wrangle about the second year's subscription to the service and how the scheme should be developed. A compromise on who pays what will no doubt be arrived at by

allow the scheme to hobble on. But what is really needed is a vote of confidence (and funds) from the Government in order to match and build on institutional contributions. This would enable the excellent and coordinated strategies, guidance arrangements and literature pioneered under the scheme to be developed in other British Council offices overseas, notably British Council offices in Korea, where Britain is rapidly losing out to our "competitors" for overseas applicants.

Failure on the part of the Government to come up with extra cash will provoke only the suspicion that institutions will end up being asked to foot the bill for all-education promotion activity carried out by the British Council. If this is an issue of national importance, as ministers keep telling us, adequate central funding is paramount.

Yours faithfully,
RUPERT BRISTOW,
Head of Student Services,
Polytechnic of the South Bank.

Open learning

Sir, - It was heartening to see that Sir Keith Joseph is now encouraging open learning (report by Maggie Richards from Newcastle and Durham in a power politics game (*THE TIMES*, May 10). It is the kind of encouragement that many of us who have worked for the development of open learning systems need to spur us on in this field.

I hope that the opportunity was also taken at that conference to point to work in open learning which complements that of the Open University; the work by bodies such as the National Extension College and the Council for Educational Technology in association with many forward-looking and imaginative people in the further education sector.

This made a reality of the concept, first put forward in the Russell report, of "forms of provision at other levels which would benefit from 'nearest analogue' of the Open University" which, with the powerful

backing of the Manpower Services Commission, is now being established as the Open Tech.

Could I also take the opportunity of offering a word of caution, as did Sir Keith, in respect of cost-effectiveness. It is, of course, true that the costs per student of open and distant learning systems tend to be lower than those of traditional face-to-face learning. What has not been established is an acceptable measure of cost-effectiveness in education in respect of any method, orthodox or innovative. We can determine costs; effectiveness is another matter.

To say that evaluation is difficult is not to deny that it is worth attempting. I believe the development review activity being conducted for the Open Tech Unit by the Tavistock Institute is producing very valuable material - but I do not think it will determine cost-effectiveness.

Yours faithfully,
OBFREY HUBBARD,
Director, Council for Educational Technology,
Chairman, Open Tech Development Review Advisory Group.

Private income

Sir, - While agreeing with David Jobbins's conclusion (*THE TIMES*, May 17) that the private income of universities is growing, I have to point out that the figures quoted in the accompanying table are not correct. The universities' total income in 1982/83 was £673.9 million for Great Britain, or 35.9 per cent of total income as published by us in *University Statistics*, volume 3.

Taking a working definition of "private funds" as overseas and extra-mural fees, endowments, and research income from non-government sources,

their private income is at a level about twice the figures quoted; I am not sure what those figures relate to, but their ratio/increase does not seem related to this discussion.

Yours faithfully,
Dr A. W. NICHOL,
Executive Secretary,
The Universities Statistical Record.

Letters for publication should arrive by Tuesday morning. They should be as short as possible, and written on one side of the paper. The editor reserves the right to cut, to amend, to omit, or to rearrange them, if necessary.

Up the wall

Sir, - David Jobbins's report on the inadequacy of climbing walls at universities and polytechnics (*THE TIMES*, May 10) highlights the major problem of climbing wall design - a problem not helped by the Sports Council's *Handbook of Sports and Recreational Building Design*.

At Teesside Polytechnic, at the design and building stage of the wall, we were fortunate in not only having the enthusiastic cooperation of Ian Dunn of the BMC but also the advice of a "rock iterate" climber who was also a design student at the polytechnic. This particular skilled input by Robert Ives ensured that we have got a wall which is at least "worth a visit".

When one takes into account the physical limitations of the area in which the wall is built and the bureaucratic and financial constraints encountered, I believe that we have in fact got an additional recreation facility of excellent value. The wall did not cost the same as a squash court, currently around £30,000, it was built on a self-help basis for under £300.

Had £30,000 been available to spend on recreation facilities then I am afraid, Mr Dunn, that we would have opted for a squash court on the grounds of greater anticipated student use. However, I am impressed at the use that our £300 wall is getting from both students (experienced and beginner climbers of both sexes) and members of the local mountaineering club.

The problem to which I would now like to direct attention is how can we build a self-help squash court (or two) for a few hundred pounds? Advice from civil engineers, architects, builders et al, "squash literate" or not, would be welcome.

Yours faithfully,
D. MCKENDOO,
Community Studies,
Teesside Polytechnic.

£1,000 gap in funding revealed

continued from front page

the position is transformed, with both the local authority and voluntary and direct grant institutions more than £300 per student behind the universities. The local authority sector is calculated to have cut its funding per student by 24 per cent over the period, while the universities' cut was only 3 per cent.

The reason for the transformation lies in the differing policies on student numbers on either side of the binary line. In real terms, funding for the local authority sector actually rose fastest over the seven years covered in the survey, but a 30 per cent increase in student numbers swallowed up the additional money. At the same time, the universities held down recruitment.

The figures assume that 30 per cent of university funding goes on research, while the public sector is allocated only £2.3 million set aside by the NAB for research. The DES commentary warns that the results should be treated with caution since they do not include all spending in the three sectors, which are "to a substantial extent not engaged in similar work."

Higher Education: *Funding comparisons across sectors*, published by the Department of Education and Science.

Police degree

What Polytechnic starts Britain's first police studies degree in September. The degree, approved by the Council for National Academic Awards, will run one day a week in the polytechnic for three years while students continue their careers.

United you must stand, historians told

Historians must overcome the fragmented nature of their discipline and make a concerted effort to prevent the subject from disappearing from the curricula of schools and universities, a Historical Association meeting was told.

The meeting, chaired by the provost of Queen's College, Oxford, Lord Blake, was called to discuss the impending atmosphere of crisis among historians, who see the Government's emphasis on science as a threat to their work.

Lord Blake said a speech by the Secretary of State for Education, Sir Keith Joseph, last February on the importance of teaching history showed that he appreciated the subject's importance. "But unfortunately, this does not seem to have been followed up by any concrete action," he said.

And although many people had been working to stress the value of history to the public, the meeting held at the House of Lords, called for fresh action by schools, universities and polytechnics to press home their case.

Talks will now take place between the Historical Association, the British Academy and the Royal Historical Society so they can make a new, joint approach to Sir Keith in defence of their discipline.

Dr Brian Harrison, from Oxford University, said one of the biggest problems historians faced was the diverse nature of the subject. "We are very fragmented, both between historians and school teachers and between different types of history. We must join together and decide what our priorities are."

Mr Sean Hughes, Labour MP for Knowsley South, said there was a "very real danger" that history would

follow classics out of the mainstream syllabus altogether. "Enthusiasm for history seems to be dying, and it is the enthusiasm of those who teach it which is its most important element," he said.

Dr John Bourne, from Birmingham University, said after the meeting that historians needed to get their message across to employers and parents to help their subject survive. "History graduates are very competitive in the jobs market, and this is a message we must get across to some employers, and they must get across to parents. A lot of nonsense currently exists in the heads of parents about the nature of the subject," he said.

"We are facing a tough time, but we must put the team together before we start playing the game," he said, referring to the lack of cooperation which presently exists among those involved in the subject.

Mr Sean Hughes, Labour MP for Knowsley South, said there was a "very real danger" that history would

Funding row unresolved

Immediate and future cooperation between local authorities and the Manpower Services Commission over non-advanced further education now hangs on a meeting of politicians taking place next week.

It is now up to commissioners and elected representatives of the local authorities to see whether they can reach agreement over what level of financial control the commission should have after a working party of officers failed to do so.

If they fail to reach agreement, it is quite likely that the conflict between the MSC and local authorities which arose last year over the White Paper *Training for Jobs* will resurface and funding of courses will be chaotic.

The officer level group which met last week successfully reached agreement on most aspects. In particular it agreed on a three-year plan which would form the basis of a contract with

the MSC and offered both the commission and employers a major say on NAPE provision.

The stumbling block came over finance. The local authorities are keen for the MSC to finance all of NAPE so as not to endanger courses which are not "leading edge" but are prepared to refund for whatever percentage of provision fails to recruit. The commission's officers insisted that if the MSC did this, it would be entitled to a refund on the whole provision.

It is understood that the commission's insistence on this form of funding is due to pressures from ministers at the Department of Employment.

Local authorities are worried that if no agreement is reached next Tuesday, they will be back to a position where the MSC funds only selected parts of the NAPE programmes with a constant risk that other valuable courses will be forced to close.

Victims of cuts 'blitz'

Adult educators have been likened to survivors of a blitz in the University of London's department of extramural studies' recently published annual report.

In the report Professor Brian Groombridge, the director, saw signs of difficulty and progress. Five members of staff had retired and would not be replaced and in eight years the course output had declined from 1,000 to 700 courses.

"We are like survivors of a blitz, each with our stories of what a bomb did here or a landmine there," he said.

Nevertheless progress had been made by the department. The provision of open access courses to university level remained most important and NAPE programmes with a constant risk that other valuable courses will be forced to close.

DON'S
DIARY

SUNDAY

Up at dawn. The big day has arrived. With four kids, this lecturer and wife are off to Hong Kong to help launch what must be the world's last polytechnic. Thatcherite cuts dwindle in significance as we settle back and the jumbo points its nose towards the Orient.

Out East, they say, students grow on trees. Could this be El Dorado after the last lean years in an English poly? Or perhaps the reverse and for a fleeting moment my mind sees a class of 500 Chinese being instructed in the art of violin playing.

Actually this possibility diminishes the prospect of distant Cathay far less than the announcement of a boring in-flight movie which tends to reduce the adventure to the level of a package trip to Weston-super-Mare on a Bank Holiday. This is the poverty of modern travel. And Dubai, our stopover, no longer a name from the *Arabian Nights*, is merely a conveniently placed petrol station en route.

Some romanticism is restored by the captain's positional announcements. We pass over the Indian subcontinent then a little north of Mandalay as we head for the southern coast of China.

MONDAY

A long but smooth trip almost over. The spectacular evening outline of Hong Kong comes into view. We have lost eight hours but kids have had a good journey. They have been amusingly hardened. Heathrow-Hong Kong commuters with their enthusiasm for maiden flight.

Airport formalities give us first experience of Asian bureaucracy. Outside an eagle-eyed poly admin assistant spots my official badge (to be affixed at the moment of touchdown, the instructions said) and we are transported by poly minibus to plush down town hotel. Pocket money is handed over and a reminder that work begins at 9 am the following day.

TUESDAY

Left the others to recover from jet-lag while I resume contact with assigned poly guardian angel at hotel desk. Shown through the bright steamy heat to the new poly headquarters. It occupies top floors of ultra modern mirrored building in Mongkok - the most populous place on the face of the Earth according to the record books. This is easy to believe.

First duty is to "sign in" and then am shown to office to meet new colleagues. All working conscientiously which seems strange at the time! would normally have been on summer vacation with family in a Devon farmhouse. Have to adjust my academic clock.

All staff share one room. They have kindly reserved a desk for me next to window with an incredibly bright blue view of Hong Kong harbour with Manhattan-style skyline of the island in the background. Quite different from the view of 10th floor well as seen from my office in 20-year-old temporary huts in Farringham End, North London.

WEDNESDAY

As the hand is on leave I find myself setting head of department. Plenty of paperwork to sort out. One of the first informs of salary increase. A pleasant shock. In Hong Kong academics in the tertiary education institutes automatically get increases awarded to civil servants.

Generous administrative back-up here. An electronic but by no means paperless office is in operation. Local staff quick enough to help the Gwillo family settle in. They have already planned to take us out to restaurants and shops where to buy things. The first of many.

Golden Shopping Arcade. This is the ultimate in user friendliness. For the price of a pint of beer a 16-year-old entrepreneur will copy a well known piece of computer software while you wait. Copyists den in videos and even whole textbooks which are delivered complete with ornate binding.

I am told that copying is not seen as wrong but as a legitimate form of enterprise even though they are periodically rounded up and heavily fined. No wonder European and American publishers shrink from sending specimen copies out here. On the way back from work in the evening walk down Dunbarton Road and post letters in one of the King George V red pillarboxes.

THURSDAY

Attended first committee meeting. Coloured safari suit seems to be *de rigueur* while traditional tropical kit of white knee-length socks and long shorts not much in evidence.

At the meeting, formation of local version of the Council for National Academic Awards high on the agenda. Afterwards repair to Chinese restaurant for lunch. Interesting choice of dishes including house speciality: noodles with fermented bean paste, pigs trotter in soup. Perhaps next time develop phobia about managing with chopsticks. Staff around the table come from Hong Kong and around the world: Japan, Australia, India and the USA, though predominantly from Britain in this last bastion of Empire. The founding of a second polytechnic goes some way to satisfying the terrific demand for places in higher education. Difficult to believe there will be over a thousand students in September.

Planning looks different from early days. Enfield College of Technology at time of Robbins. Then we proceeded along chaotic growth path. This polytechnic is a definitive example of central planning which is paradoxical in a classic *laissez-faire* economic system.

FRIDAY

Go out to visit the staff quarters in New Territories. Worst fears realized by appearance of an immense high rise atop an already steep hill. We have been allocated one of the top floors.

The lift sticks between the 24th and 25th floors. A local person trapped too and we are able to communicate with the outside world through silt in lift door as temperature rises. Remember to keep silt upper lip in these circumstances. Twenty minutes later, calamity averted, we are in our eyrie and looking at fine views across to China in the distance though we dare not look down for fear of vertigo.

The New Territories resembles a large building site. Hong Kong "belongings" tell us that ten years ago it was little more than a single road winding through paddy fields. Now the mapmakers cannot keep up with the pace of change.

SATURDAY

Have relaxing day and take stock. It will be a different ball game out here. At least 25 well qualified students for each place on polytechnic courses. Army of administrators to work and contend with. Incredible bureaucracy derived in part from years of colonial administration.

Staff are enthusiastic about this new and stimulating enterprise and new to "1997" has been diffused there is more optimism for the future. For the *Gwillo* the cultural differences between the outgoing masters and a young confident Cantonese middle class will perhaps present the greatest challenge.

This is also the land of the instant decision. Coming from a country where decisions evolve in the fullness of time it is difficult to adjust. The method here is to organize the alternatives and choose one. No contemplation about reversing it next day if necessary.

This is the Cantonese way and the reason they make ideal capitalists. Am beginning to master chopsticks but little hope of ever speaking Cantonese.

Tony Crilly

The author is principal lecturer in mathematics, City Polytechnic of Hong Kong.

Scots plan united action on closures

by Peter Aspden

Scottish university principals are set to meet to discuss plans for collective action in the event of department or faculty closures.

They are putting before their respective university courts a proposal which, if passed, will allow them to meet as a group and discuss informally their reactions to the effects in Scotland of the University Grants Committee's financial squeeze.

The principal of Edinburgh University, Dr John Burnett, said he has already received *carte blanche* from his university's court to participate in such discussions.

Dr Burnett presented a paper at the last meeting of the Standing Committee of Scottish Universities urging the need for talks about joint action.

"If the UGC is to go ahead with its

plans for rationalization, it is in our interests to ensure that if a subject or department is recommended for closure, it will still be available in one of the eight Scottish universities," he said.

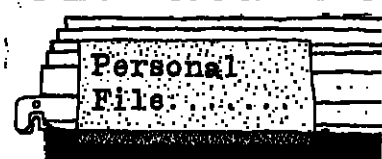
"It struck the committee as a sensible approach, as we must prepare for the potential onslaught ahead."

But the plan has already been condemned by a delegate at the Association of University Teachers conference held in Glasgow last week.

Mr Iain MacFarlane, from Stirling University, said the proposals to reorganize faculties across the country amounted to "playing academic swap-shop".

He also said it was a good example of universities' willingness to capitulate in advance to Government and UGC demands, rather than "stand up and be counted".

Shepherd of a flock of mature students



by Felicity Jones

The Church very nearly claimed the new pro-vice chancellor (continguing education) of the Open University after he graduated in theology and classics from St John's College, Cambridge.

But after only one term at theological college Mike Richardson turned to the shepherding of mature students instead.

With a less than sympathetic Government breathing down the OU's neck, great things are expected from continuing education. The Secretary of State for Education and Science has expressed the wish to see expansion in this area and Mike Richardson is aware that he has moved into the hot seat.

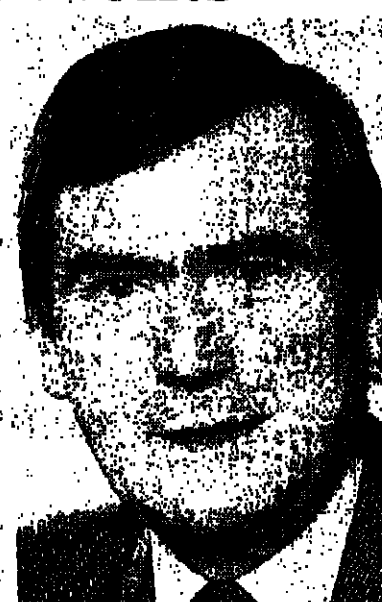
His two priorities are to persuade the paymasters to provide some flexibility on the principle that all continuing education should be self-financing and more immediately to get the £2.4 million Pickup loan changed into a grant. He says this would make "a world of a difference" to their ability to expand.

He is aware that the university expects him "to provide tangible financial returns" to provide academic opportunities for new clients; and to put the OU in a good light.

No mean feat for a department which already provides short courses for 40,000 users, a third of the OU's total students.

The mass audiences for their study packs are in "personal" liberal education and in community education, catering for an individual's role in such areas as school governorship, parenthood and conservation.

He said: "One of the disappointing things is that the pressure of cuts has



already forced the price of these courses up too high and only where you have local authority like Strathclyde, which is prepared to sponsor students, are we reaching our target audience." Not traditional, white middle-class students.

It is in the professional post-experience and postgraduate updating field that the main thrust has and will continue to be made. The Science and Technical Updating Programme (SATUP) and management education are marked as growth areas and the university council has just agreed to a diploma in management through the Open Business School.

"The important thing for us will be to maintain the correct balance between the necessary concentration on courses for a more highly skilled workforce and that which benefits individuals in terms of self-development."

There is very little point in having a hi-tech society if you have people who are unable to cope with it," he added.

CNAA opts for slimmer teacher education body

The Council for National Academic Awards has decided to replace its committee for education with a new body which will no longer delegate responsibility for validation activities.

The committee for teacher education, as it is now to be known, will have as its main role monitoring all courses in public sector teacher education.

It will be served by two boards instead of the existing four, one for initial training and another for in-service.

The CNAA believes it is important to bring all initial training under one board - previously there were two, the undergraduate and postgraduate boards - because it will enable a common policy on all aspects of teacher education.

For example there are both common aspects and differences in the BEd and PGCE courses which are best dealt with by one board.

happened in terms of the setting up of the Council for Accreditation of Teacher Education which is responsible for the whole of initial training and the National Advisory Body having one programme committee dealing with initial training.

The CNAA says the INSET board will be particularly useful in responding quickly to frequent Government changes, and to the demand from institutions wanting to set up new courses.

This is particularly the case for one-term courses where there are no awards, but where a credit system is now under consideration.

The first course under such a heading has been submitted by Aberdeen and has now been approved. This only took a month from submission to approval and will enable the institution concerned, if it so wishes, to start the course in science teaching for rural schools from September.

Councils in power struggles

by Karen Gold

Power battles are continuing in local education authorities where recent council elections produced no clear majority. Political control of the council and its education committee is still undecided in several counties, while fragile unofficial alliances are established in others.

In Avon, which contains Bristol Polytechnic, Labour has lost its overall majority, with seats now divided Labour 37, Conservative 31, Liberal 8. The parties held their annual council meeting last week but were unable to agree on how to divide up committee seats.

In Devon, which contains Plymouth Polytechnic and the College of St Mark and St John, the Conservatives lost overall control, with seats distributed between Conservatives 37, Alliance 36, Labour 10 and Independent 2.

Although no formal pact is to be made, the Alliance and Labour councillors were expected to agree common committee proposals for 12 months, thus forcing the Conservatives out of power.

In Essex, which contains Chelmer Institute, the parties have agreed proportional representation on committees which means that Labour (29 seats) and the Liberals (22 seats) can outvote the Conservatives (45 seats). The Conservatives keep the education committee chair.

In Hampshire, which contains Portsmouth Polytechnic, the Conservatives have kept the committee chair, meaning Mr Philip Meridale, chairman of the Association of County Councils education committee keeps the education committee chair, but the other seats are proportionally filled, giving the Conservatives fragile control.

In Hertfordshire, which contains Hatfield Polytechnic, the Conservatives have lost their overall majority but kept the chairmanship of the education committee. The rest of the seats are allocated proportionally.

In Humberside, which contains Humberside College, Labour have lost overall control and the four Liberals holding the balance of power are expected to come to an agreement with the 35 Conservatives to oust Labour (36 seats). The education committee is expected to have a Conservative chairman.

In Lancashire, which contains Lancaster Polytechnic, there is still confusion. Labour has lost overall control; both its 48 councillors and the Conservatives 41 have nominated committee chairmen, and the decision will depend on who the eight Alliance councillors support.

In Oxfordshire, which contains Oxford Polytechnic, an "urgency subcommittee" of the education committee has been created to deal with all decisions normally taken by a majority party chairman.

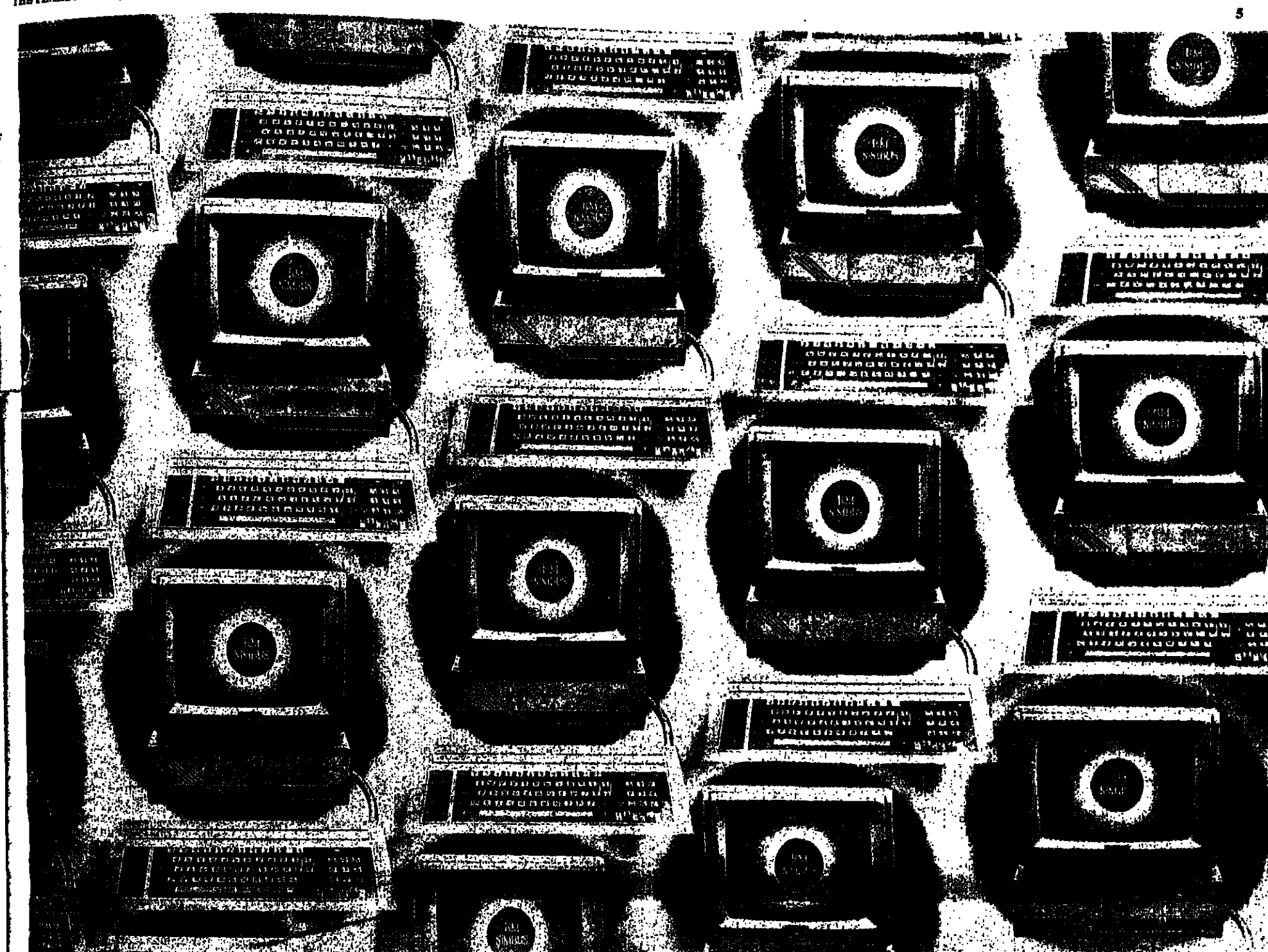
The composition of the Association of County Councils, Tory controlled before the elections, may change. All three of its representatives on the National Advisory Body committee are now from living councils - Mrs Josie Farrington, Lancashire; Mr Paul White, Essex; and Mr Meridale, Hampshire - and their position is uncertain.

Union to resist gay campaign

Lecturers' union leaders are to oppose a demand for an immediate campaign to end discrimination against lesbians, gay men and common law partners in the teachers' pension scheme.

Delegates to the annual conference of the National Association of Teachers Education in Plymouth this weekend are to discuss the possibility of plans for a campaign to be drawn up by November.

But the union's executive and senior officials are to argue in support of a move from the East Anglian region to drop the idea. They believe that National Association of Teachers Education should concentrate on improving the wider significance of the scheme, which has effectively remained frozen for 25 years.

RM NIMBUS
THE COMPLETE NETWORK SYSTEM

As a stand-alone machine, the brilliant RM Nimbus has already proved itself superior in performance/price terms to any comparable microcomputer.

As a network system, Nimbus is even more impressive. Because, unlike so many 'networkable' machines, Nimbus was designed from the beginning as a network workstation, as well as a stand-alone system.

POWERFUL. FLEXIBLE. AFFORDABLE.

Whether you want a network to share software and data in the computer room, or a professional multi-user system for the college, Nimbus will do it. Your Nimbus network server can provide up to 80 megabytes for sharing. And you can connect up numbers of peripherals simultaneously via Piconet, Research Machines' unique input/output system.

Meanwhile, each Nimbus station brings fast processing, stunning graphics and at least 320K memory. Its built-in network interface allows each user to share expensive central resources such as Winchester peripherals and word processing software, with all the benefits of file record locking and password security.

COMPLETE SUPPORT PACKAGE

With over 1000 Research Machines networks installed, we know what users want - a complete hardware, software, service and support system.

For educational buyers, every Nimbus network comes with a free software bundle specially chosen to support the varied computing activities which exist side by side in education. This includes Microsoft Word, Multiplan, Superfile, and a wide range of graphics packages, languages and utilities.

There's a one-year warranty on all RML-manufactured hardware, and smooth, quick service facilities should you ever need them. Best of all, every user has unlimited free access to our specially trained Technical Support team.

UNBEATABLE VALUE

Nimbus becomes more economical the more you demand of it. Considerable savings can be made by sharing software and peripherals, and these savings become greater as you increase the number of workstations. Research Machines is offering special educational prices on its networks. A server can cost as little as £2508** (£2108 to schools)

and stations as little as £898** (£745 to schools). Stand-alone systems start at £945**.

And these prices include our generous software bundle.

To find out more about the brilliant Nimbus networks, phone Research Machines on Oxford (0865) 249866, or use the coupon.

*Trade mark of Microsoft Corporation.
**Price for educational customers, students, teachers and lecturers.
Prices exclude monitor and VAT.

To: Caroline Rawley, Research Machines Limited,
Mill Street, Oxford OX2 0BW.
Please send me details of RM Nimbus network ☐

NAME _____
POSITION _____
ADDRESS _____
CITY _____
TELEPHONE _____

RESEARCH MACHINES
A MICROCOMPUTER COMPANY

ANTI-THESES

A welcome change?

Sir Keith Joseph's name was noticeably absent from the weekend lists of cabinet ministers facing the axe in the autumn. But Sir Keith may have ideas of his own. His final words to a recent delegation from the Association of University Teachers, after a typically fraught "discussion" were: "Why don't you come back in six or seven months time and see my successor, whoever that might be."

Meanwhile a ministerial reshuffle is going on at the Department of Education and Science, just outside Sir Keith's door. The victims are his predecessors, whose photographs have suddenly disappeared from the ministers' waiting room at Elizabeth House.

The official line is that redecoration of the whole floor is imminent and all will return in due course. It is hotly denied that they are being moved sideways to make way for Sir Keith.

The identity of Sir David Phillips, chairman of the Advisory Board for the Research Councils, was giving Sir Keith a little trouble at another recent meeting. The name kept cropping up. "Who is he? Is he a civil servant?" the secretary of state asked one of his embarrassed advisors. On being informed of Sir David's post, Sir Keith replied, unabashed: "Well, he's practically a civil servant, poor fellow."

Who says those who can't do, teach? The Malaysian government, faced with a vast backlog of cases in its courts, has drafted the country's law lecturers into temporary posts as part-time magistrates and sessions court presidents. The only snag is that the law schools consider themselves understaffed already and claim they will now be hindered still further in tackling the root of the problem by producing more trained lawyers.

Expert among their numbers

As the University Grants Committee braces itself to plan for the 1990s, it can at least be grateful for one of its number who has done it all before. Professor Richard Layard, recently appointed to the UGC, assisted Claus Moser, as statistical assessor on the Robbins Inquiry.

Lord Robbins said in his autobiography that he had learnt most in his inquiry from his experts: "Whatever may be said of the report of the (Robbins) committee, and its recommendations, the supplementary statistical and institutional survey... seem to me to be one of the most notable achievements of social studies in our time."

Glasgow deputy provost James McCarron thought he was in for a quiet evening as chief guest at the Association of University Teachers conference dinner. So he was somewhat bewildered, after coffee and speeches, to find himself whisked away from the top table by the union's persuasive general secretary Diana Warwick and seated in the back row of a next-door concert by the cabaret rock group Harvey and the Wallbangers.

Old boys in blue

The Queen's visit was a time for living down old reputations at Essex University. Not only did the occasion pass off without a hint of trouble, but it all took place under the watchful eye of two Essex sociology graduates, Police Superintendent Robin Blackmore and Chief Inspector Stefan Labedzki.

New realism at the end of the honeymoon

by Peter Scott

The Association of University Teachers was in a dogged, defensive, down-to-earth mood at its council meeting in Glasgow last week. The contrast was remarkable with the Manchester council a year ago when in the inebriating excitement of the miners' strike a minister was heckled and £1,000 donated to the National Union of Mineworkers.

Last week it was a different story. A demand from one radical delegate that the AUT should be "cleansed" of those in management positions was received with little enthusiasm by the massed ranks of senior lecturers in

Glasgow's City Chambers. A motion to establish a Scargill-type disciplinary code fell when in a startling reversal of reputations none of its left-wing sponsors was present to move it.

A new realism therefore seems to be overtaking the AUT. But it is far from the corporatist collaboration with a hostile Government briefly encouraged by the Trades Union Congress 18 months ago. Instead what seems to have happened is that the AUT has become convinced that just to defend the universities as they are will be a long grinding struggle in which historians have little place.

Their realism has more echoes of Verdun than of Munich.

So if the level of politicized posturing was low at Glasgow it was not because the AUT has gone soft on its opposition to the Government. The reverse has happened. The steady 2 per cent rundown of university budgets, the prospect of a two (or three) tier university system, the discrimination against social science and arts are regarded as such serious threats that there is no time for posturing.

One side effect of this intensifying hostility was that last week's Glasgow council marked the end of any honeymoon between the AUT and the University Grants Committee and its new chairman Sir Peter Swinnerton-Dyer.

On Jarratt there is a surprising symmetry of views between the AUT and the vice-chancellors; both dislike the industrial ethos, although both individual vice chancellors are not averse to exploiting its rhetoric, but both realize that a diminished opposition is politically hazardous.

On pay the AUT had to fight a tightrope at Glasgow. The motion cannot afford to desert to the salaries struggle, partly because the offence this would cause to the union solidarity and partly because the latter may be offered again recently more than the 4.5 per cent which the AUT has three-quarters reconciled itself to accepting.

On the other hand the AUT must afford to get sucked into an all-out offensive on this year's salary data. The real battle is to take place next year on the AUT's claim to remedy the erosion that has taken place in the value of university teachers' pay - which they hope to have the aid support of the vice chancellors.

That is why the council approved the apparently strange device of a ballot that asks neither of the obvious questions - do you want to accept the 4.5 per cent offer or do you support industrial action in support of a better offer. The real point of the ballot of course is to play for time and to bring moral pressure on the vice chancellors to show greater leniency.

The third issue that emerged at Glasgow was the "condition of the executive" question. The advice of the executive was overruled twice, on the appointment of an additional regional official which the AUT leaders opposed on grounds of economy and on a proposal to reduce the number of council meetings from two to one a year which they also opposed.

On the first delegates seemed to feel that in the troubled years ahead much more of the difficult action in which the AUT would be embroiled would be at the grass roots. On the second it was argued that having the number of councils would shift the focus of the AUT from national policy-making, much of it ineffective in the present political climate, to the local campaigning. Winning battles and hearts and minds, rather than winning the arguments maybe.

Already at Glasgow the outline of this new realism could be glimpsed at a national level a more pragmatic AUT, eager to build up the broadest possible university coalition, and not of local level a much tougher and more campaigning association.

On the first delegates seemed to feel that in the troubled years ahead much more of the difficult action in which the AUT would be embroiled would be at the grass roots. On the second it was argued that having the number of councils would shift the focus of the AUT from national policy-making, much of it ineffective in the present political climate, to the local campaigning. Winning battles and hearts and minds, rather than winning the arguments maybe.

Already at Glasgow the outline of this new realism could be glimpsed at a national level a more pragmatic AUT, eager to build up the broadest possible university coalition, and not of local level a much tougher and more campaigning association.

On the first delegates seemed to feel that in the troubled years ahead much more of the difficult action in which the AUT would be embroiled would be at the grass roots. On the second it was argued that having the number of councils would shift the focus of the AUT from national policy-making, much of it ineffective in the present political climate, to the local campaigning. Winning battles and hearts and minds, rather than winning the arguments maybe.

Already at Glasgow the outline of this new realism could be glimpsed at a national level a more pragmatic AUT, eager to build up the broadest possible university coalition, and not of local level a much tougher and more campaigning association.

On the first delegates seemed to feel that in the troubled years ahead much more of the difficult action in which the AUT would be embroiled would be at the grass roots. On the second it was argued that having the number of councils would shift the focus of the AUT from national policy-making, much of it ineffective in the present political climate, to the local campaigning. Winning battles and hearts and minds, rather than winning the arguments maybe.

Already at Glasgow the outline of this new realism could be glimpsed at a national level a more pragmatic AUT, eager to build up the broadest possible university coalition, and not of local level a much tougher and more campaigning association.

On the first delegates seemed to feel that in the troubled years ahead much more of the difficult action in which the AUT would be embroiled would be at the grass roots. On the second it was argued that having the number of councils would shift the focus of the AUT from national policy-making, much of it ineffective in the present political climate, to the local campaigning. Winning battles and hearts and minds, rather than winning the arguments maybe.

Already at Glasgow the outline of this new realism could be glimpsed at a national level a more pragmatic AUT, eager to build up the broadest possible university coalition, and not of local level a much tougher and more campaigning association.

On the first delegates seemed to feel that in the troubled years ahead much more of the difficult action in which the AUT would be embroiled would be at the grass roots. On the second it was argued that having the number of councils would shift the focus of the AUT from national policy-making, much of it ineffective in the present political climate, to the local campaigning. Winning battles and hearts and minds, rather than winning the arguments maybe.

Already at Glasgow the outline of this new realism could be glimpsed at a national level a more pragmatic AUT, eager to build up the broadest possible university coalition, and not of local level a much tougher and more campaigning association.



Leftwing delegates to the council were not present to argue the case for a tough disciplinary code for AUT members when it was unexpectedly called early on the second day. No one from the University of London Computer Centre was present to move their branch's motion and when they were present time ran out before they could open the eagerly-anticipated debate on freemasonry in the universities.

Leftwing delegates to the council were not present to argue the case for a tough disciplinary code for AUT members when it was unexpectedly called early on the second day. No one from the University of London Computer Centre was present to move their branch's motion and when they were present time ran out before they could open the eagerly-anticipated debate on freemasonry in the universities.

Leftwing delegates to the council were not present to argue the case for a tough disciplinary code for AUT members when it was unexpectedly called early on the second day. No one from the University of London Computer Centre was present to move their branch's motion and when they were present time ran out before they could open the eagerly-anticipated debate on freemasonry in the universities.

Leftwing delegates to the council were not present to argue the case for a tough disciplinary code for AUT members when it was unexpectedly called early on the second day. No one from the University of London Computer Centre was present to move their branch's motion and when they were present time ran out before they could open the eagerly-anticipated debate on freemasonry in the universities.

Leftwing delegates to the council were not present to argue the case for a tough disciplinary code for AUT members when it was unexpectedly called early on the second day. No one from the University of London Computer Centre was present to move their branch's motion and when they were present time ran out before they could open the eagerly-anticipated debate on freemasonry in the universities.

Leftwing delegates to the council were not present to argue the case for a tough disciplinary code for AUT members when it was unexpectedly called early on the second day. No one from the University of London Computer Centre was present to move their branch's motion and when they were present time ran out before they could open the eagerly-anticipated debate on freemasonry in the universities.

Leftwing delegates to the council were not present to argue the case for a tough disciplinary code for AUT members when it was unexpectedly called early on the second day. No one from the University of London Computer Centre was present to move their branch's motion and when they were present time ran out before they could open the eagerly-anticipated debate on freemasonry in the universities.

Leftwing delegates to the council were not present to argue the case for a tough disciplinary code for AUT members when it was unexpectedly called early on the second day. No one from the University of London Computer Centre was present to move their branch's motion and when they were present time ran out before they could open the eagerly-anticipated debate on freemasonry in the universities.

Survey may come under scrutiny

by Jon Turney
Science Correspondent

The sorry state of the British Geological Survey is emerging as a likely candidate for a new top-level science policy inquiry as the Kendrew Committee's investigation of high-energy physics draws to a close.

The Advisory Board for the Research Councils has called for a separate paper on geological surveying from the Natural Environment Research Council as part of this year's "forward look" submissions in the annual science budget debate. It will be read in the context of repeated calls from the geological community for an inquiry into the NERC's support for the survey, now based at Keyworth in Nottingham.

The survey's £23 million a year operation is run by the largest component of the NERC. But a cash squeeze on commissioned research from Government departments as well as from the science budget side of its finances meant its basic work almost came to a halt last year.

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

The geology lobby is concerned about the future of the BGS under the NERC's new corporate plan, which will put the survey under the control of a new director of science for the earth sciences. Some members of the council are also in favour of an inquiry, and the NERC paper for the advisory board will stress that continuity of geological surveying is a basic requirement for the understanding of the subject. The Department of Education and Science

and chief scientists are also discussing its role although there is little sympathy in Whitehall for the suggestion that it should have another home in the Department of Energy.

Within the ABRC, the Kendrew inquiry, which was set up jointly between the Board and the Science and Engineering Research Council, may be seen as a useful precedent for tackling a subject which concerns the board but which is mainly the responsibility of a single research council.

This would imply a group with terms of reference endorsed by both sides, without any direct BGS representation, but able to draw on specialist advice. Early indications are the group would be invited to look at the BGS alone, with special emphasis on the decline in commissioned research, rather than having a wider remit. The main difference from the Kendrew group would be the need to take account of industrial interests.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.

The Institution of Geologists, which is compiling a study of funding for geological research to back a lobbying effort on behalf of the subject. A report on geophysics from the Royal Society expected to appear in the next few weeks will be highly critical of the NERC's handling of the BGS. Both will lead weight to calls for an inquiry from geologists like Professor John Dewey of Durham University, who resigned from the NERC after publication of the corporate plan, and Professor John Sutton, a former council member.



Fly the flag: space shuttle astronaut Dr Jeff Hoffman presents Professor Edward Marsland, vice chancellor of Birmingham University, with a Union Jack which flew on a shuttle mission earlier this year. Dr Hoffman presented the gift on behalf of the US National Aeronautics and Space Administration, in recognition of the university's effort in building an X-ray telescope for the next shuttle mission, which will launch Spacelab-2 in July.

More than half stay on

More than half the 16-year-olds in England and Wales stay on at school or go on to non-advanced further education, according to the 1985 edition of the Government statistical service publication *Regional Trends*.

The figures for 1982/83 show that East Anglia had the lowest staying on rate, at 48 per cent, and Wales the highest with 50 per cent. Of school-leavers intending to go on to full-time further education, the North had the smallest proportion, with 19.5 per cent, and the South-West the largest with 31 per cent followed by the South-East with 29 per cent.

East Anglia had the smallest number of students and the South-East the most. The issue also shows the first figures for the Youth Training Scheme which was introduced in 1983. The largest number of YTS trainees was in the Midlands. London had the highest proportion of trainees of employer-based Mode A schemes, while the North had the highest proportion - roughly half - on workshop and college-based Mode B schemes.

Regional Trends, with 130 pages and 50 maps and charts, contains a descriptive profile of each region as well as information on population, housing, health, education, law enforcement, employment, energy, production, distribution, investment, agriculture, forestry, personal income and household expenditure. *Regional Trends 20*, £17.50, available from HMSO.

The report, based on a survey of the destination of school and college leavers during 1984, says this is partly due to the higher grades demanded both for entry to higher national diploma courses, and by employers.

More than a third, around 35 per cent, went into higher education courses, 28 per cent to degree courses and 7 per cent to advanced courses, while 10.6 per cent found jobs.

The careers service report also shows that leavers are finding it increasingly hard to get jobs without first having been on a training scheme. Last year only 9 per cent of those who left school or college at the statutory age did so, compared to nearly 14 per cent in 1983 and 70 per cent some 10 years ago.

The report says this indicates not only alarming trends in youth unemployment but what amounts to an unofficial raising of the school leaving age which most probably applies to the rest of the country.

Figures show that 37 per cent of school-leavers entered youth training schemes, 26.8 per cent remained at school and 11.3 per cent entered further education.

"It is obvious that full employment as it was known in the past in Birmingham will not return. New initiatives are needed that will enable young people to handle positively and creatively periods of unemployment and underemployment as well as increased leisure," the report says.

It points out too that of the 9.2 per cent who did get jobs - 7.7 per cent girls and 10.7 per cent boys - fewer than one in three actually obtained employment offering any kind of skills training.

The report also looked at the destinations of different ethnic groups, finding that one in five of Birmingham school-leavers came from a non-white ethnic minority background, a remarkable 46 per cent of Asians continued in full time education and only 17 per cent entered the Youth Training Scheme.

In comparison 34 per cent of Afro-Caribbeans and 31 per cent of Whites continued in full time education, and 45 per cent entered YTS.

In comparison 34 per cent of Afro-Caribbeans and 31 per cent of Whites continued in full time education, and 45 per cent entered YTS.

In comparison 34 per cent of Afro-Caribbeans and 31 per cent of Whites continued in full time education, and 45 per cent entered YTS.

Training closure inquiry

by Felicity Jones

The lack of subsidized training for supervisory and blue-collar workers through the closure of the Manpower Services Commission's training within industry scheme (TWI) is to be investigated.

The British Association for Commercial and Industrial Education, a charity concerned with vocational training and education, is to carry out a research project to see what effect the closure of the scheme has had on training for supervisors in communication skills, export, health and safety.

The MSC decided to close the TWI scheme because it thought the gap left would be filled elsewhere in the system. The BACIE itself organizes short courses on a full-cost recovery basis. It wants to see whether training within London firms has been affected and identify what alternative training courses are being used.

The fear is that employers are abandoning training altogether faced with the cost of short courses of £300 compared to £30 of those courses subsidised by the MSC. There had been a dramatic fall in demand for such courses. The numbers of people on the TWI scheme had tumbled off from 27,000 in the late 1960s to 8,000.

Mr Steve Sharples, head of the research project, said: "The MSC did provide a service and just because there was a drop off in applicants does not mean that there is no interest."

In its last year the TWI had undergone a revamp and the signs were that this was changing attitudes, he said. Under Greater London Training Board funding, the investigation will also try to find out employers' views on what the role of the MSC should be in the provision of direct training.



No, it's not out of "The Hackers' Guide." Just the geography department determined to discover what the zoology department is doing with the Plotmate.

Plotmate is the new, rugged, responsive flatbed plotter that takes all the colour, vector, character and graphics commands of a BBC micro.

Plug-in intelligence makes it compatible with other micros too. Plotmate will turn out 3D graphs, 2D charts and diagrams. A2 posters. Maps. Drawings. Sketches. And some pretty fantastic patterns. All for less than £300.

No micro system is now complete as an educational or research tool if it doesn't include a Plotmate.

Phone 0702 541664 for details, and keep hacking out of colleges.



LINEAR GRAPHICS LIMITED
28 Purdys Way, Purdys Industrial Estate, Rochford, Essex.
Telephone 0702 541664. Telex 995701. Fax 358.

LINE



Problems of working in isolation

"Curlouser and curlouser", Alice once remarked. The same thoughts seem appropriate comment on the Government's whole approach to policymaking in higher education.

The Green Paper on higher education was finally published this week. It was originally promised early in the new year but then ostensibly delayed to encompass a review of student support mechanisms following the Government's defeat on student grants in autumn 1984.

It still isn't clear how this important issue will be handled, but any review which is limited to mandatory awards will only represent half a policy leaving provision for the whole 16-19 age group in its present unsatisfactory and confused state.

Two major aspects of higher education policy have already had to be addressed in order that the National Advisory Body can proceed with its planning exercise for higher education for 1987/88. The Secretary of State earlier this year indicated to the NAB and the University Grants Committee Government policy on both student numbers and funding.

Similarly, the Government set in train in April 1984 a major review of academic validation in the public sector. The report from the Lindop committee was published this April and the committee, having interpreted its remit flexibly, made recommendations on a very wide cross-section of issues concerned with the maintenance of standards in the public sector. If implemented in full this would have consequences well beyond technical questions of validation affecting for example the structure of institutions.

The Green Paper makes brief reference to such issues but places the Department of Education and Science has set a very tight timescale in asking for responses to the Lindop committee report by early June (the real deadline are being taken outside the framework of the Green Paper).

On May 8 the Government decided to ask the National Advisory Body to tender advice to the secretaries of state on management practice in the public sector. Sir Keith has identified those issues on which he hopes to receive advice from the NAB, some of which again cross-cut those matters considered by the Lindop committee.

During the course of last year the Government asked for and received from the NAB and the UGC, comprehensive advice on a range of issues affecting higher education planning to the end of the century.

We had anticipated a response to that advice which would set a framework for developing coherent patterns of provision on both sides of the binary line and shape higher education to the year 2000. Instead we have isolated policy decisions, newly-commissioned studies and reports from independent committees established to look merely at one aspect of policy. The Green Paper adds almost nothing.

Higher education desperately needs a coherent policy framework and the Government conspicuously failed to address itself to this question during its first term of office. The Green Paper was Sir Keith's only chance to do so.

Jean Bocoock

The author is assistant secretary for higher education at the National Association of Teachers in Further and Higher Education.

Tuning in to the economy's needs

From the first page, the Green Paper sets out the Government's intention to produce a higher education system more attuned to the needs of the economy and aware of the consequences for non-vocational subjects.

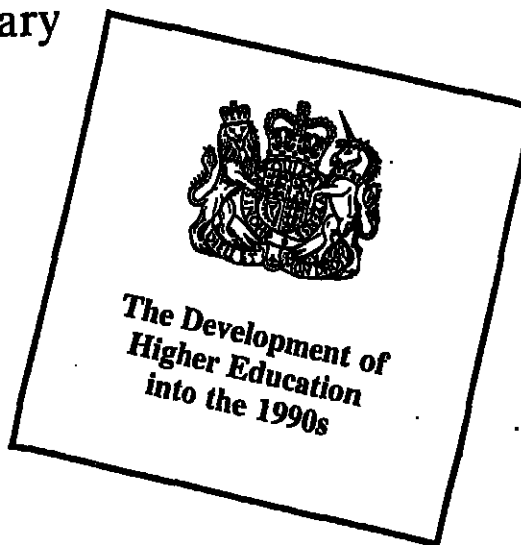
It immediately denies placing a low value on the general cultural benefits of education and research or, specifically, on the study of the humanities. But it warns: "Unless the country's economic performance improves, we shall be even less able than now to afford many of the things that we value most including education for pleasure and general culture and research as an end in itself."

A thriving economy needs more qualified scientists, engineers, technologists and technicians and initiatives throughout education are geared to producing them. The possibility of financial incentives to encourage students into relevant areas is cited as one item for debate in the forthcoming review of student support.

"The shortage of appropriately qualified manpower can be made good only if higher education is sufficiently flexible to respond quickly to new needs," says the paper. "As the UGC has said, the universities in particular need to develop greater ability to adapt to change."

Great importance is attached to

John O'Leary with the details of the Green Paper on higher education



raising standards, it adds. The universities are considered the "principal guardians of pure academic excellence and the main source of creative research" but should not be regarded as the model for higher education as a whole. It is accepted that some public sector institutions have a graduate output superior in quality and fitness

to that of the universities. Three other essentials are identified for all higher education institutions: to be concerned with attitudes to the wider world particularly industry and commerce and to beware of "anti-business snobbery". Students need a positive attitude to work and to be able to work cooperatively in groups as well

as individually, show leadership and respond to it;

to develop links with industry and commerce along the lines of the existing practice;

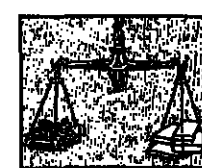
strong links with their local communities. Sharing of artistic, cultural and recreational facilities is encouraged, as well as close contact with local firms.

The Government has no wish to impose a uniform pattern on higher education and would like to see, on the contrary, more vitality and flexibility. It sees greater financial independence as one step in this direction.

The introductory chapter, which also expresses particular concern about freedom of speech on campus and the need to increase effectiveness in research, ends in a call for improvements over a wide front.

"Adjustments in higher education are undoubtedly needed now," it concludes. "More will be required as a result of the decline in student numbers that is to be expected in the 1990s. The years between now and then allow opportunity to plan for that situation constructively and to resolve other outstanding policy questions. It is not improbable that some institutions of higher education will need to be closed or merged at some point during the next 10 years."

Balancing act is advocated



In its discussion on the role of higher education in relationship to the economy, the Green Paper places most emphasis on the encouragement of innovators and entrepreneurs and provision for vocational courses where there is a market need.

It acknowledges continuing concern that higher education does not always respond sufficiently to changing economic needs. Failures in communication between employers and institutions, and overdependence on public funding are considered two major disincentives to change.

Greater involvement by employers is favoured and the new Information Technology Skills Agency is cited as a good example of collaboration.

Subject balance and especially the influences on choices of subject both in schools and higher education are a major concern. The fact that additional places in science and technology approved by the National Advisory Body have not been taken up is "remarkable" given the level of youth unemployment and the better job prospects for those in the mathematics and physics areas.

Employers are urged to give clear signals of the importance they attach to competence in science and technol-

ogy, including steady levels of recruitment and enhanced pay and promotion prospects. More sponsorship of students will be encouraged.

The Government confirms its intention to "maintain a distinct emphasis on technological and directly vocational courses at all levels". But the Green Paper accepts that employers value broadly-based personal skills and states that the whole graduate body can make a contribution to the development of the economy.

There is a commitment to adequate provision for the arts. But the paper warns: "Even when allowance is made for the needs of part-time students, arts provision should to some extent be concentrated in those institutions of quality which for the most part it should be within the university sector. It will be subject to rationalization, and admission to the arts in the universities will continue to be highly competitive." It adds that those advising potential students (particularly girls) should take account of the likelihood that the proportion of arts places in higher education will shrink.

Continuing support - in principle

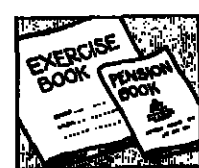
The Government accepts an obligation to give a lead in promoting continuing education but does not believe that the arguments for taxpayer support are the same as for initial higher education.

Employers should be expected to pay the costs of courses which meet their requirements and mature students in work should also make a "substantial contribution" towards course costs, whether career advancement or personal satisfaction is the motive for enrolment.

Opportunities for education should be available throughout life, especially at a time of increasingly technological change, the Green Paper asserts. Initial education cannot suffice for an individual's working life and employers should support their staff financially to update their skills and knowledge. It is noted that employers in most other industrialized countries concern themselves more with this.

It is recognized that not all vocational study will be undertaken in the interests of employers. The unemployed deserve, and receive, special attention, the paper says; but the self-employed and those contemplating career changes should be expected to contribute towards costs.

Some universities are taken to task for not making a more extensive commitment to continuing education.



And in the public sector, some local authorities are asked to reexamine their attitude and approach because of a feeling that internal financial and administrative procedures do not encourage institutions to run such courses.

Professional bodies are encouraged to follow the lead by those which require updating for continued registration. Ministers will consider the question further in the light of advice from PICKUP agents.

What is described as "liberal adult provision" rates only a single paragraph in the Green Paper. The Government will continue to support work such as that done by university extramural departments and the Workers' Educational Association through direct funding. New funding arrangements for the extramural departments are expected to encourage more innovation and experiment, and more effective collaboration with other providers.

The Open University is praised for its international reputation and record of innovative use of new technology in education. The Government hopes for more collaboration between the OU and the major planning bodies to ensure the most effective use of resources.

Door opened wider for those able to benefit

Acceptance of the revised "Robbins Principle" proposed by the NAB and the UGC is heavily qualified in the chapter on access to higher education.

As the advisors wished, formal qualification will be replaced by "the ability to benefit" as a main criterion for entry to advanced courses. But the Green Paper adds a rider: "So long as taxpayers substantially finance higher education, however, benefit has to be sufficient to justify the cost."

Two further caveats are included: the student's motivation and maturity must be consistent with the course, which must itself be of sufficient standard; and selection procedures must be rigorous, assessing the ability to benefit those with qualifications as stringently as those without.

"Deferred entry to higher education is given an approving mention and the Government also declares its intention to simplify transfer from courses such as those initiated by the Business and Technician Education Council to degree."

In spite of the criticism made of last year's student demand projections for the remainder of the century, no further revision has been made of the estimates beyond that published in January, which merely took account of 1983 student numbers. Arguments about the likelihood of greater demand from women and mature students are not addressed in the paper.

Instead, the projection remains that demand will fall in the first half of the 1990s as the number of 18 and 19-year-olds drops. Despite similar arguments from both the NAB and the UGC, the lower of the two projections included in last year's review of student demand remains the basis of the Govern-



Projected total student numbers (home and overseas full-time and sandwich)

ment's recognition of their value and in line with the British policy objectives. "The great majority of overseas students must be expected to pay fees that cover the cost of their education. They should not be subsidized by the British taxpayer," the paper says.

There is also a reminder to institutions that courses must be relevant to overseas students' needs. They should be an integrated academic and welfare policy recognizing both special tutorial needs and the difficulty of adapting to a new environment.

No further clue is given on the likely split between the two sectors of higher education in advance of talks between the UGC and the NAB. But the Green Paper warns against any trend towards "automatic admission to universities, and particularly on to likely to profit in terms of personal development and technological prospects from the vocational and technological courses offered by the public sector."

A section on overseas students reiterates the Government's recognition of their value and in line with the British policy objectives. "The great majority of overseas students must be expected to pay fees that cover the cost of their education. They should not be subsidized by the British taxpayer," the paper says.

There is also a reminder to institutions that courses must be relevant to overseas students' needs. They should be an integrated academic and welfare policy recognizing both special tutorial needs and the difficulty of adapting to a new environment.

No further clue is given on the likely split between the two sectors of higher education in advance of talks between the UGC and the NAB. But the Green Paper warns against any trend towards "automatic admission to universities, and particularly on to likely to profit in terms of personal development and technological prospects from the vocational and technological courses offered by the public sector."

It is accepted that the levels of fees and student support will have a significant impact on future demand. Although both are left for discussion in the forthcoming review of student support. The possibility of student loans replacing at least part of the grant is specifically noted. A "greater financial engagement" on the part of students might encourage them to take more care over their choice of study, the paper argues.

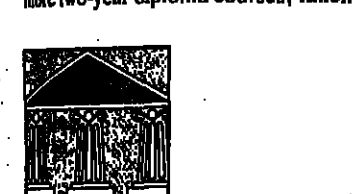
Two-year degree goes ahead 'Start planning to reduce' message

The Green Paper gives the go-ahead to the NAB's proposal for an experimental two-year degree for high-achievers, but does not favour an extension of general two-year courses, either as degrees or diplomas.

It is lukewarm about the broadening of degree courses which the Robbins Committee considered so important. Such a trend has taken place, it says, but has been constrained both by the rapid expansion of knowledge in many subjects and the limits inherent in a three-year course.

Outside Scotland, the single-subject honours degree is still regarded as the paradigm, the paper says. It adds only: "But provided they are sufficiently rigorous, broader degree courses have significant part in higher education."

The NAB's recommendation of more two-year diploma courses, taken



to mean a straightforward expansion of DipHE programmes, is rejected as it is judged to have failed as a terminal qualification and it is not found to be in the interests of students or the economy to extend the experiment. The NAB is invited to "consider how the DipHE might be developed as an alternative that might be more appropriate for some students than general humanities or social studies degree courses."

Higher national diplomas and certificates are given a vote of confidence from the Government, which also promises to use its course approval powers to prevent academic drift into lower-level degrees aimed at a similar students and employment outlets.

Verdicts on sandwich education are largely deferred pending consideration of a long-running inquiry into the subject. The Green Paper finds evidence that sandwich courses do not always justify their extra cost, while accepting that the case is well made in principle.

No support is offered for moves to extend degree courses, other than as a school experiment involving a small number of universities and polytechnics catering for the most able students. But neither is there any intention to submit to pressure for longer courses in some subjects.

On non-standard access to higher education, the Green Paper sees a challenge in maintaining a route for late developers and those who chose not to enter from school, while ensuring that standards are maintained. Anything less would be unfair to the existing student, to the institution involved, to the other students and to the taxpayer, it says.

Particular importance is attached to distance education, which is considered to be not only the best but the only means of spreading knowledge about new and rapidly developing disciplines quickly and on a substantial scale. But it requires greater investment in planning and could be used more widely.

Other than the use of external examiners, the Green Paper accepts that procedures for judging quality are bound to vary widely, although it recommends that the chosen system should be explicit and open.

In the public sector, current consideration of the Lindop report precludes detailed comment. The same applies to some extent to the universities because of the deliberations of the Robbins committee, but there is a rejection of the Leverhulme Inquiry's proposals for academic review bodies to be established.

It is noted that there are also outstanding questions about how universities are to be funded in the event of a change from staff, students or the public. It is difficult to take a grievance beyond the Chancellor or, in some cases, the Visitor. Universities must be encouraged to be more open and accountable, the paper argues. The Government is concerned about the present lack of transparency and is discussing with the UGC how this might be done.

The sting in the tail of the Green Paper is the Government's view that whole institutions will have to amalgamate or close as student numbers drop during the 1990s.

Planning for such developments will have to begin soon, the paper warns, with the advisory bodies determining how to assess on educational and economic grounds where capacity should be reduced. The Government "will be fully engaged" in applying the resulting criteria.

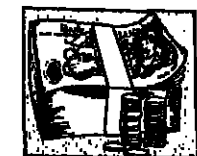
A survey of developments since 1980 admits to a real terms reduction of about 3.5 per cent in funding for higher education, while student numbers rose substantially. For some institutions the reductions have been severe but others have been relatively protected," the paper finds.

Universities are said to have lost one member of staff in seven, polytechnics and colleges 12. Purchases of books, periodicals and equipment have been curtailed and economies made in the maintenance of buildings and in running costs.

Student/staff ratios in universities are found to have slipped only from about 9.4:1 to 10:1, but a 30 per cent increase in polytechnic and college numbers has meant a tightening of ratios from about 8:1 to more than 10:1, with a reduction of more than 10 per cent in unit costs. The change in grant-aided colleges has been even more dramatic, as unit costs have been cut by over 20 per cent.

Public spending plans already announced imply a further worsening of staff/student ratios as part of continuing rationalization of provision.

The constraints underline the need for more income to be found from sources other than the taxpayer and the ratepayer, the paper says. But none of the schemes designed to transform the rela-



tionship between higher education and the public purse have proved workable so far. "The Government concludes, with regret, that no substantial part of established public funding responsibilities can be shed."

However, the Government does see scope for higher education to obtain considerably more income from business and private sources, given the right approach and more effort. Public funding will be determined in the light of what the country can afford, so other income may be needed to supplement grants.

A major disappointment for the public sector comes with the rejection of the NAB's case for a common unit of resource for teaching purposes. Even when allowance is made for special factors, universities are found to have relatively higher operating costs because of more generous provision of land, premises, staffing and equipment, and because of the UGC's decision to restrain student numbers.

The Government would in any case need to be convinced that, given the differences between institutions, any reallocation of resources between sectors would actually produce a net benefit to higher education as a whole, and hence to society," the paper concludes. Providing new equipment, especially for the new

Merit awards high on the agenda

Differential rates of pay to reward outstanding academics and to attract those whose skills are in short supply are placed firmly on the agenda for consultation in the Green Paper. The Government believes that pay in higher education should perhaps reflect supply and demand more than at present. Undifferentiated pay scales have not posed a problem in attracting or holding staff in most fields, but there are areas where this is becoming the case.

Merit awards could be used to reward academics making an outstanding contribution to an institution but with no immediate prospects of promotion. Rigorous staff appraisal would have to underpin any new system.

There is no clear response to the UGC's recommendation that the Government should withdraw from university pay negotiations. But both the universities and the public sector are reminded of the need to reach settlements which they can afford.

The paper confirms the Government's determination to legislate to reform tenure in those universities which give it to academic staff. "No compulsory redundancy" agreements applied inflexibly by some local authorities are seen to be a similar impediment to reorganization in the public sector.

Changes are also likely in probationary periods for academics. The UGC's recommendation to increase the period to five years is accepted and a



call is made for improved arrangements for probation. For the public sector, views are sought on whether to insist on a probationary period and on the extent to which new teachers receive satisfactory induction and are judged at this stage for suitability.

The Green Paper lays down the principle that all teachers in higher education should have the opportunity and encouragement to develop and update their professional skills and knowledge. And it calls for each institution to develop a formal framework for evaluating performance and responding to staff development needs.

More general management questions are mostly deferred while the Government and the universities consider the Jarrett Report on efficiency and the NAB commissions its own studies, in order to assess institutions' success or failure, the DES is considering a range of performance indicators, some of which are listed in an annex to the paper. One yardstick favoured is the regular publication of a range of unit costs and other indicators both by institution and department.

Universities stand to lose whole of research funds

Greater concentration and selectivity may mean that some departments or even whole universities will lose research funding from the UGC, the Green Paper warns.

The Government supports the selective approach and hopes to see it in operation for 1986/87. Research councils should also be able to increase support for selected university departments to supplement the Government's additional grants for the next three years.

It casts doubt on the claims made by the UGC and other commentators that cuts in university budgets have fallen especially on research more time to teaching. University income from research grants and contracts have been rising in real terms, the Government claims. Total research income in higher education was thought to be about £600 million a year. "A study to produce greater certainty is in progress."

Overall, higher education's contribution to the nation's research effort is intended to continue on about the present scale. But there is a need for better management and closer working with industry, commerce and the public services.

There is only a passing mention of research in the public sector, although here too the Government supports the NAB's selective approach. "Some research of high quality and almost wholly applied character, is properly done in public sector institutions," the paper concedes.

There is no evidence that all academic staff must engage in research, the Government believes, in stating that some excellent teachers, in all types of institution, have little or no personal research commitment. The document distinguishes between scholarship and research, accepting that all academics must keep up with relevant scholarship.

Business and higher education are reminded of the mutual benefits of links for technology transfer, consultancy and other joint projects. Institutions are urged to follow good practice, including taking outside work into account in promotion boards, free-granting of permission for business activities, part-time contracts of joint appointments for those heavily engaged in industrial links, and reasonable deals for the sharing of income from such work.

Institutions should not subsidize their research and consultancy claims



and should add an appropriate share of overheads to calculations of direct costs. Good financial management should be an important criterion for the allocation of research funds.

Special mention is made of the humanities and of the Government's concern for the health of research in the arts. Some relief in the restrictions placed on library spending can be had through increased collaboration between institutions. The Leverhulme Inquiry proposal for a research council for the humanities is rejected on the grounds that it could only be funded at the expense of other research councils or the British Academy.

Institutions are urged to improve their control of access to postgraduate study and their supervision students who are accepted. The Government shares the concern of those who have criticized the length of time taken to submit some theses and wants the relevant bodies to monitor progress in speeding up completion rates.

The Development of Higher Education into the 1990s (Continued 924), £8.50 from HMSO, 1985, 128 pp., 0 709 01234 1

technologies, is given high priority for future spending, although there is scope for no more than marginal impact on the size of overall capital stock. Existing assets will have to be used to maximum purpose and cooperation between institutions agreed where appropriate.

Plans from the UGC, the NAB and the Jarrett Committee for longer funding horizons are treated sympathetically but cannot be accommodated under existing public expenditure planning procedures. Institutions are advised to plan on the assumption that existing trends will continue, subject to indications given about long-term policy intentions.

Six factors are listed as important influences on future Government policy on higher education: Student demand, as affected by the number of qualified school leavers and mature students, the level of student support and the availability and attractiveness of alternatives to higher education.

The need for qualified manpower and the case for a continued switch into science and technology.

The need to stimulate in-career training, professional updating and other forms of continuing education.

The need to provide adequately for research and to ensure effective deployment of the available resources.

The scope for increased economy and efficiency in and between institutions, including further rationalization of provision and consideration of the optimum distribution between sectors.

The outcome of the review of student support, and especially the extent to which students, their families and other sponsors might progressively assume greater responsibility for their participation in higher education.

UGC review - but no single body



An independent review of the University Grants Committee will be announced shortly, but the Government has ruled out the creation of a single planning body for higher education.

Only in Scotland, where recommendations are awaited from the Scottish Tertiary Education Advisory Council, is there any possibility of major change in national planning arrangements. Overall, no scope is seen for "an overarching body" to encompass both the National Advisory Body and the UGC as the Government accepts its own responsibilities in this area.

The review of the role, structure and staffing of the UGC was recommended by the Jarrett committee and is expected to be given a wide brief. Its membership and terms of reference may be announced next month, with the inquiry expected to take no more than a year.

It is accepted that the relationship between the UGC and the Government has become the subject of some controversy, especially since the advent of regular letters of guidance from the Secretary of State. These will continue, although a guarantee is given in the Green Paper that they will not deal with individual institutions and will not seek to make the UGC do the Government's proper work.

No changes are envisaged in the NAB or the Wales Advisory Body. Both are urged to examine the association between advanced and non-advanced further education in terms of the necessary geographical spread. But the paper finds evidence that degree work is so much better done where there is a concentration of such provision that this consideration should prevail over the claims of easy access.

Some concern is expressed at the lack of public understanding of the work of polytechnics, although they are left to improve their own image. The ambitions of some colleges to become polytechnics is also noted, together with the issue of institutions awarding degrees.

Further planning across sectors is encouraged in the paper, as is collaboration between institutions on either side of the binary line. The advisory bodies are asked to promote collaboration in library access and purchasing, in the use of equipment and laboratories and in joint teaching arrangements. They are given a year to produce an account of what might be achieved and a framework for technology

Honorary degree change vetoed

by Paul Flather

Oxford University has decided not to make any changes in the way it awards honorary degrees to active politicians. The decision comes despite some calls for reforms after last term's controversial snub to Mrs Thatcher. The prime minister was not awarded an honorary degree because of her policy of cutting education.

A number of dons, led by Professor Richard Gombrich, professor of Sanskrit and Dr Steven Lukes, politics tutor, both from Balliol College, called for a ban on all nominations of honorary degrees for active politicians.

The issue was formally raised on the university's governing Hebdomadal Council by Professor A. H. Halsey of Nuffield College who argued that it was not right to pass judgement on someone still active in politics. He argued that it was best to wait until they retired.

But it is understood that the Hebdomadal Council has taken advice from the university's committee on honorary degrees and decided not to introduce such a rigid rule.

It is understood that the council voted by 15 to one against any reforms "which might make it impossible to put up people who had made some notable contribution or service to the state" for such an award.

Many of the 738 dons who voted against awarding Mrs Thatcher an honorary degree - the first Oxford educated prime minister since 1946 to be denied the honour will welcome the new decision but for different reasons. Their vote was aimed only at Mrs Thatcher, not other politicians. Any rule change now would be seen as weakening the impact of that vote.

But other dons had hoped future embarrassment for Oxford might be



Alessandro Pertini: honorary degree

ruled out by excluding active politicians from two major public rows - one over Mrs Thatcher, and one in 1975 when President Bhutto of Pakistan was refused an honorary degree on account of his involvement with the massacre of Bangladeshis.

The decision was taken by council some weeks ago but has not been announced. This week Mr Geoffrey Warnock, the vice chancellor, and other council members, declined to comment on what they say is confidential business. It is understood that council members have been instructed to give as little publicity as possible to this decision to "avoid further embarrassment".

Some dons will see this as further evidence that the council is simply out of touch with the majority of dons.

Meanwhile it is still not known whether Sir Alessandro Pertini, president of Italy will be coming to Oxford on June 26 as planned to receive his honorary degree, awarded on the same day as Mrs Thatcher was refused hers.

Updating projects launched

by Maggie Richards

Two major new dimensions have been added to the development of updating programmes with the launch of projects last week in Sheffield and London.

Both ventures aim to focus the attention of business and commerce on training and retraining opportunities available in further and higher education institutions, through the Pickup programme of professional, commercial and industrial updating run by the Department of Education and Science.

In a new move which links Pickup courses to other facets of adult education and training, an education and training "shop" has been established in Sheffield, while in London eight institutions have combined to produce tailor-made courses for industry via an educational consortium, only the second of its kind in the country.

Sheffield's education and training shop began as a guidance service and has now been expanded into a central agency dealing with inquiries and counselling on all aspects of education and training.

Now titled Sheffield Link, the agency has a staff of eight whose task, apart from offering on the spot information and advice, will be to actively promote the education and training facilities to employers in the city.

The scheme has the backing of Sheffield's University, polytechnic and further education institutions, which are all collaborating with the local education authority to provide the new service. The city's chamber of commerce will also play a leading role in the venture, in an effort to encourage consumer participation.

Initially funded as part of the Pickup programme, the scheme is intended eventually to become self-financing, with full economic rates being charged for courses.

In London a new consortium, based on the highly successful Pickup model Coventry, was launched last week. Whereas the Coventry scheme involves only one local education authority, the North East London Consortium, based at Waltham Forest College in Walthamstow, embraces six education authorities. Eight colleges spread through north-east London and Essex are linking with North East London Polytechnic for the project.

The consortium has been examining ways of helping major industries in the area, and has already devised schemes for updating employees in the east end fashion trade and prepared a training plan for the area's large freight and forwarding industry. Other smaller projects have included establishing an advisory centre for small Asian-owned firms.

As far as equipment is concerned, HMI says there is adequate provision for the college's specialist courses, but that changes in technology have meant that some of it has become out of date.

The college is praised for having established support for staff to meet new demands on a sound basis, but HMI stresses that there is a need for the framework of policy to be strengthened and developed.

Both schemes in London and Sheffield were officially launched by Mr Peter Brooke, under secretary for higher education at ceremonies last week.



Demo forces MP to abandon speech

An angry confrontation erupted outside a meeting at Bristol University which was to have been addressed by right wing Conservative MP Mr Harvey Proctor.

Mr Proctor left the meeting, organized by the Burke Society, after a few minutes when it became clear he was not going to be able to speak, despite the intervention of a university official who issued a reminder of the university's stated free speech policy.

Mr Proctor, MP for Billericay, has been the target of attempts to stop him speaking at a number of universities. Bristol's acting vice-chancellor, Professor Peter Haggitt is understood to have apologized and a return visit is being considered.

'Undecided' losing out, says HMI

Darlington College of Technology successfully meets the needs of most of its students but fails to provide for those who have not decided on a career, according to a report on the institution from Her Majesty's Inspectorate.

The report, based on a visit during spring 1984 says that it only offers those young people GCE courses which in many cases do not match their needs at all.

HMI recommends the college should consider ways in which the needs of these particular students might be met. It points out that students studying a subject such as A level art purely out of interest create a distinct disadvantage for examination candidates when they are part of the same group.

In terms of accommodation, the college suffers from general teaching rooms which are too large for present needs. In addition there were no smaller tutorial rooms associated with the science laboratories, and there was a lack of seminar rooms for senior nursing courses.

As far as equipment is concerned, HMI says there is adequate provision for the college's specialist courses, but that changes in technology have meant that some of it has become out of date.

The college is praised for having established support for staff to meet new demands on a sound basis, but HMI stresses that there is a need for the framework of policy to be strengthened and developed.

Talks start on Soviet student link

Mature students from the Soviet Union could come to study in this country if delicate discussions through the Soviet embassy are successful.

The Russian students would attend literature classes at Oxford University's external studies department, which is one of the few external university departments to have suitable accommodation.

The discussions, still at the preliminary stage, over the study visit are being held through the GB/USSR Cultural Association.

Outline proposals have been sent to the association and to the Soviet attaché but such is the protocol involved that it could take at least a year before any decisions are made.

Contact with the Russian students has been made through the Workers Educational Association which has organized study tours to the Soviet Union for several years. They are arranged by the WEA's south-east district tutor organizer, Mr Harold Goodwin who has also organized tours to China, and to India for the first time this year.

"We hope that if the negotiations are successful this could be the start of similar exchange visits from Chinese adult students who we have made contact with through visits to the palaces of culture," said Mr Goodwin.

About 40 students travel agency, Voyages Jules Verne, which has educational contacts outside the main cities which makes it a particularly useful source of interchange.

An Irish university has come up with the perfect means of ensuring its students are successful - give them the answers along with the exam questions. And for some reason that falls the alternative is to give them a paper which some students will have seen already.

The authorities at University College, Dublin, are still embarrassed by the 120 students could hardly have been the mass hangings of 12 students on campuses around the country in 1978 by repeating the act. In 1983, two university lecturers were strung up and last year, when Dr Jones was at Garyounis, two students were hung at El Fath University and another - a law graduate - was killed in Benghazi.

After a year at Garyounis, Mr Jones was glad to get out of Libya. When he accepted the offer of a job in the faculty of arts and education at the University of Garyounis, Dr Jones was told he would be able to transfer up to 90 per cent of his salary - the equivalent of £20,000 - to another country in hard currency.

In January last year, after he had arrived in Libya and settled in at the university, academics were told they could only transfer 50 per cent of their salaries out of the country.

"The change meant my salary was virtually halved and in the event I was only able to transfer £5,000 altogether," he said.

But problems over money were only a small part of worries of European academics, said Dr Jones. Living in Libya was like spending time in an armed camp where bizarre and unexpected occurrences were commonplace. On one occasion he was arrested on a morals charge for wearing typically Australian gear - shorts and a thonged sandals - in a supermarket. He spent a short time in jail before being released.

Dr Jones said that academics were told there were millions of Libyan dinars available for research but that in fact it was frowned upon. Classes were constantly being interrupted by revolutionary meetings and he estimated half of the academic year was lost in this way.

"You have to give away your civil liberties and in a sense you become a hostage to the country," with your presence there in a way condoning the savage regime that exists," Dr Jones said.

Standards at the university were low and in reality it was not much more than a secondary school. Students were supposed to have had three or four years of prior English teaching but in fact most "were hopeless".

"Arabs cheat like hell so when we were giving them a test they felt they had to help each other. I was hauled up before the dean of the faculty for allowing it to happen after one of the revolutionary students reported me, although I wasn't aware it was going on at the time."

Rude awakening for Italian research

by Paul Flather

A radical shake-up of the way research is organized in Italy's institutes and universities is under way in a bid to improve results, save money and limit the "hacorrhaging" of researchers to other jobs.

The reforms are being pressed by Professor Luigi Rossi-Bernardo, a biochemist and president of Italy's national research council (CNR) who took over at the beginning of the year with instructions to make the system more efficient.

Professor Rossi-Bernardo made his intentions clear in a strong presidential address when he promised to galvanize the "half asleep" character of the CNR and produced a list of changes.

Some 200 directors of institutes were summoned to Rome and told about new steps to promote strategic research, encourage competition for scarce funds, foster growth of new specialist research centres and inter-relationships between laboratories.

Debate about Italy's ailing research structure has been widespread for a number of years. The mood of gloom is summed up for example by Professor Rogero Pierantoni, a biophysicist working for the council. "The council has lost its gloss," he said. "Many of my colleagues are very unhappy. We feel like third class researchers."

Many researchers also complain that grants have often been given out as a matter of routine and seniority and not on merit, that the CNR career structure is so rigid that no one can move around for fear of having to start again at the bottom.

There also are worries about a brain drain with top academics being lured abroad and bright young researchers being turned off their work "just playing tennis" according to one professor.

The new proposals from the CNR are aimed at some of the basic problems. First, grant assessment is to be extended. All institutes this year have to fill in proper *scheda* (forms) by the end of April justifying why they need extra funding, replacing the long-winded, usually self-congratulatory reports that used to be compiled annually.

The new system asks for precise, documented information backed with documentation. The assessment is to be done by academics familiar with the subject field. Most significant of all, Professor Rossi-Bernardo has made it clear that not everyone will get money.

Second, the CNR is mapping out a strategic research programme setting priorities. Professor Rossi-Bernardo is urging collaboration between institutes with common interests, and there is increasing emphasis on applied work.

Areas singled out for attention include image processing analysis, space technology, informatics, new technology, and molecular biology. An example of a special goal is to develop a machine to carry out standard postnatal health checks for use as a preliminary guide to a baby's health on small Italian islands where experts may not be immediately available.

Third, travel abroad, considered

essential for reaching the top in Italian academic circles, is to be controlled. Scientists particularly have always spent time in better equipped foreign laboratories. A top biologist might have spent a year in Scandinavia, two at Catec in Pasadena, and two years at the Max Planck Institute in West Germany, with salaries at "overseas rates".

Now academics will be sent to do specified research in concentrated bursts or to learn useful new techniques to import back to Italy. Salaries will be less generous and researchers will be expected back on time.

Fourth, there is to be pressure for convergence of research work into centres of excellence. Professor Rossi-Bernardo wants to reverse the trend when institutes were set up in remote spots all over the country to escape the chaos of the student troubles from 1968 to 1974. Many institutes now find themselves isolated from appropriate libraries, support services and industrial centres. The CNR would like institutes moved back to major cities.

On research centre under threat is the Institute of Cybernetics and Biophysics based in a beautiful village just outside Genoa. It was started 12 years ago in a set of villas which are now quite unsuitable. Already half the team has to work in the University of Genoa.

Plans to build a new laboratory are off and when the lease on the villas ends at the end of the year the institute looks certain to split up.

There are fears that Professor Rossi-Bernardo may be moving too fast and

that the government will be forced to undertake national youth service. A one month course at one of two training camps is mandatory to the majority of new entrants wanting to attend Kenyan universities. Today is the last day for students to report to their respective camps.

The new scheme that started last year is intended to instil discipline into university students and make them responsible citizens. According to the national director of the service Mr G. W. Griffin, handicapped students, nursing mothers and mature age entrants are exempted.

Students admitted to foreign universities are also exempted. The programme is unpopular in certain quarters. Early in February when the students of the University of Nairobi clashed with the police one of their many grievances was that some students from influential families were accepted into the university without

having undergone the course at Naivasha or Oligi.

The vice-chancellor of the University of Nairobi, Professor Joseph Mungai, said that only one student had been accepted at the university without having done the youth training as he was physically handicapped.

Before the Easter break a large number of first year students at Kenyatta University College, Nairobi set their national youth service uniforms on fire in defiance of a government order to surrender the uniforms to the college authorities. The students were allowed to keep the uniforms after the first national youth service course last year.

It is alleged that the government wants the students to hand over the uniforms as it was highly incensed by reports that the students from Nairobi's main campus wanted to stage a guard of honour to be inspected by one of their leaders wearing the service uniforms. The government officials feel that the students should not be entrusted with the uniforms because of

their past relationship with the government especially during the February confrontation with police when one student was killed and many others injured. They are worried that the students might use the uniforms in situations that might embarrass the government.

The national youth service was started to cater specifically for Kenya African National Union young activists who had no basic training in any profession at the time of independence. In the early 1970s it was suggested that the service should be extended to the university or school-leavers but the suggestions did not bear fruit.

The recruits are taught carpentry, masonry, driving, plant operation and metal work after undergoing a military drill course which is supposed to instil discipline among the recruits. The pre-university cadres undergo the last year of their education at the service. The government officials feel that the students should not be entrusted with the uniforms because of

overseas news

Rude awakening for Italian research

by Paul Flather

A radical shake-up of the way research is organized in Italy's institutes and universities is under way in a bid to improve results, save money and limit the "hacorrhaging" of researchers to other jobs.

The reforms are being pressed by Professor Luigi Rossi-Bernardo, a biochemist and president of Italy's national research council (CNR) who took over at the beginning of the year with instructions to make the system more efficient.

Professor Rossi-Bernardo made his intentions clear in a strong presidential address when he promised to galvanize the "half asleep" character of the CNR and produced a list of changes.

Some 200 directors of institutes were summoned to Rome and told about new steps to promote strategic research, encourage competition for scarce funds, foster growth of new specialist research centres and inter-relationships between laboratories.

Debate about Italy's ailing research structure has been widespread for a number of years. The mood of gloom is summed up for example by Professor Rogero Pierantoni, a biophysicist working for the council. "The council has lost its gloss," he said. "Many of my colleagues are very unhappy. We feel like third class researchers."

Many researchers also complain that grants have often been given out as a matter of routine and seniority and not on merit, that the CNR career structure is so rigid that no one can move around for fear of having to start again at the bottom.

There also are worries about a brain drain with top academics being lured abroad and bright young researchers being turned off their work "just playing tennis" according to one professor.

The new proposals from the CNR are aimed at some of the basic problems. First, grant assessment is to be extended. All institutes this year have to fill in proper *scheda* (forms) by the end of April justifying why they need extra funding, replacing the long-winded, usually self-congratulatory reports that used to be compiled annually.

The new system asks for precise, documented information backed with documentation. The assessment is to be done by academics familiar with the subject field. Most significant of all, Professor Rossi-Bernardo has made it clear that not everyone will get money.

Second, the CNR is mapping out a strategic research programme setting priorities. Professor Rossi-Bernardo is urging collaboration between institutes with common interests, and there is increasing emphasis on applied work.

Areas singled out for attention include image processing analysis, space technology, informatics, new technology, and molecular biology. An example of a special goal is to develop a machine to carry out standard postnatal health checks for use as a preliminary guide to a baby's health on small Italian islands where experts may not be immediately available.

Third, travel abroad, considered

essential for reaching the top in Italian academic circles, is to be controlled. Scientists particularly have always spent time in better equipped foreign laboratories. A top biologist might have spent a year in Scandinavia, two at Catec in Pasadena, and two years at the Max Planck Institute in West Germany, with salaries at "overseas rates".

Now academics will be sent to do specified research in concentrated bursts or to learn useful new techniques to import back to Italy. Salaries will be less generous and researchers will be expected back on time.

Fourth, there is to be pressure for convergence of research work into centres of excellence. Professor Rossi-Bernardo wants to reverse the trend when institutes were set up in remote spots all over the country to escape the chaos of the student troubles from 1968 to 1974. Many institutes now find themselves isolated from appropriate libraries, support services and industrial centres. The CNR would like institutes moved back to major cities.

On research centre under threat is the Institute of Cybernetics and Biophysics based in a beautiful village just outside Genoa. It was started 12 years ago in a set of villas which are now quite unsuitable. Already half the team has to work in the University of Genoa.

Plans to build a new laboratory are off and when the lease on the villas ends at the end of the year the institute looks certain to split up.

There are fears that Professor Rossi-Bernardo may be moving too fast and

that the government will be forced to undertake national youth service. A one month course at one of two training camps is mandatory to the majority of new entrants wanting to attend Kenyan universities. Today is the last day for students to report to their respective camps.

The new scheme that started last year is intended to instil discipline into university students and make them responsible citizens. According to the national director of the service Mr G. W. Griffin, handicapped students, nursing mothers and mature age entrants are exempted.

Students admitted to foreign universities are also exempted. The programme is unpopular in certain quarters. Early in February when the students of the University of Nairobi clashed with the police one of their many grievances was that some students from influential families were accepted into the university without

having undergone the course at Naivasha or Oligi.

The vice-chancellor of the University of Nairobi, Professor Joseph Mungai, said that only one student had been accepted at the university without having done the youth training as he was physically handicapped.

Before the Easter break a large number of first year students at Kenyatta University College, Nairobi set their national youth service uniforms on fire in defiance of a government order to surrender the uniforms to the college authorities. The students were allowed to keep the uniforms after the first national youth service course last year.

It is alleged that the government wants the students to hand over the uniforms as it was highly incensed by reports that the students from Nairobi's main campus wanted to stage a guard of honour to be inspected by one of their leaders wearing the service uniforms. The government officials feel that the students should not be entrusted with the uniforms because of

their past relationship with the government especially during the February confrontation with police when one student was killed and many others injured. They are worried that the students might use the uniforms in situations that might embarrass the government.

The national youth service was started to cater specifically for Kenya African National Union young activists who had no basic training in any profession at the time of independence. In the early 1970s it was suggested that the service should be extended to the university or school-leavers but the suggestions did not bear fruit.

The recruits are taught carpentry, masonry, driving, plant operation and metal work after undergoing a military drill course which is supposed to instil discipline among the recruits. The pre-university cadres undergo the last year of their education at the service. The government officials feel that the students should not be entrusted with the uniforms because of

essential for reaching the top in Italian academic circles, is to be controlled. Scientists particularly have always spent time in better equipped foreign laboratories. A top biologist might have spent a year in Scandinavia, two at Catec in Pasadena, and two years at the Max Planck Institute in West Germany, with salaries at "overseas rates".

Now academics will be sent to do specified research in concentrated bursts or to learn useful new techniques to import back to Italy. Salaries will be less generous and researchers will be expected back on time.

Fourth, there is to be pressure for convergence of research work into centres of excellence. Professor Rossi-Bernardo wants to reverse the trend when institutes were set up in remote spots all over the country to escape the chaos of the student troubles from 1968 to 1974. Many institutes now find themselves isolated from appropriate libraries, support services and industrial centres. The CNR would like institutes moved back to major cities.

On research centre under threat is the Institute of Cybernetics and Biophysics based in a beautiful village just outside Genoa. It was started 12 years ago in a set of villas which are now quite unsuitable. Already half the team has to work in the University of Genoa.

Plans to build a new laboratory are off and when the lease on the villas ends at the end of the year the institute looks certain to split up.

There are fears that Professor Rossi-Bernardo may be moving too fast and

that the government will be forced to undertake national youth service. A one month course at one of two training camps is mandatory to the majority of new entrants wanting to attend Kenyan universities. Today is the last day for students to report to their respective camps.

The new scheme that started last year is intended to instil discipline into university students and make them responsible citizens. According to the national director of the service Mr G. W. Griffin, handicapped students, nursing mothers and mature age entrants are exempted.

Students admitted to foreign universities are also exempted. The programme is unpopular in certain quarters. Early in February when the students of the University of Nairobi clashed with the police one of their many grievances was that some students from influential families were accepted into the university without

having undergone the course at Naivasha or Oligi.

The vice-chancellor of the University of Nairobi, Professor Joseph Mungai, said that only one student had been accepted at the university without having done the youth training as he was physically handicapped.

Before the Easter break a large number of first year students at Kenyatta University College, Nairobi set their national youth service uniforms on fire in defiance of a government order to surrender the uniforms to the college authorities. The students were allowed to keep the uniforms after the first national youth service course last year.

It is alleged that the government wants the students to hand over the uniforms as it was highly incensed by reports that the students from Nairobi's main campus wanted to stage a guard of honour to be inspected by one of their leaders wearing the service uniforms. The government officials feel that the students should not be entrusted with the uniforms because of

their past relationship with the government especially during the February confrontation with police when one student was killed and many others injured. They are worried that the students might use the uniforms in situations that might embarrass the government.

The national youth service was started to cater specifically for Kenya African National Union young activists who had no basic training in any profession at the time of independence. In the early 1970s it was suggested that the service should be extended to the university or school-leavers but the suggestions did not bear fruit.

The recruits are taught carpentry, masonry, driving, plant operation and metal work after undergoing a military drill course which is supposed to instil discipline among the recruits. The pre-university cadres undergo the last year of their education at the service. The government officials feel that the students should not be entrusted with the uniforms because of

their past relationship with the government especially during the February confrontation with police when one student was killed and many others injured. They are worried that the students might use the uniforms in situations that might embarrass the government.

The national youth service was started to cater specifically for Kenya African National Union young activists who had no basic training in any profession at the time of independence. In the early 1970s it was suggested that the service should be extended to the university or school-leavers but the suggestions did not bear fruit.

The recruits are taught carpentry, masonry, driving, plant operation and metal work after undergoing a military drill course which is supposed to instil discipline among the recruits. The pre-university cadres undergo the last year of their education at the service. The government officials feel that the students should not be entrusted with the uniforms because of

their past relationship with the government especially during the February confrontation with police when one student was killed and many others injured. They are worried that the students might use the uniforms in situations that might embarrass the government.

The national youth service was started to cater specifically for Kenya African National Union young activists who had no basic training in any profession at the time of independence. In the early 1970s it was suggested that the service should be extended to the university or school-leavers but the suggestions did not bear fruit.

The recruits are taught carpentry, masonry, driving, plant operation and metal work after undergoing a military drill course which is supposed to instil discipline among the recruits. The pre-university cadres undergo the last year of their education at the service. The government officials feel that the students should not be entrusted with the uniforms because of

their past relationship with the government especially during the February confrontation with police when one student was killed and many others injured. They are worried that the students might use the uniforms in situations that might embarrass the government.

The national youth service was started to cater specifically for Kenya African National Union young activists who had no basic training in any profession at the time of independence. In the early 1970s it was suggested that the service should be extended to the university or school-leavers but the suggestions did not bear fruit.

The recruits are taught carpentry, masonry, driving, plant operation and metal work after undergoing a military drill course which is supposed to instil discipline among the recruits. The pre-university cadres undergo the last year of their education at the service. The government officials feel that the students should not be entrusted with the uniforms because of

their past relationship with the government especially during the February confrontation with police when one student was killed and many others injured. They are worried that the students might use the uniforms in situations that might embarrass the government.

The national youth service was started to cater specifically for Kenya African National Union young activists who had no basic training in any profession at the time of independence. In the early 1970s it was suggested that the service should be extended to the university or school-leavers but the suggestions did not bear fruit.

inevitable suspicions that he is linked too closely to the Christian Democratic Party.

But some of the underlying problems of the research structure - especially the exodus of staff from the CNR - will be harder to solve. In particular the CNR does not have the money to match salaries now on offer in universities.

Italian academics have long claimed to be the poorest paid intellectuals in Europe. A full university professor gets about \$15,000 a year going down to about \$9,000 dollars for the third tier of untenured assistant professors. But since 1980 salaries have been increasing and more important a third of university lecturers have been given full tenure.

Italians also work much shorter hours than their British counterparts. A typical lecturer is expected to do just 400 hours of work a year. Researchers meanwhile have a 40 hour week and get about \$7,500 dollars a year and no tenure.

But the greatest change in the past decade has been the fact that universities are now attractive places to work in after the years of campus unrest. The *retore* (rectors) are now independent academic appointments. Students are fully represented on university committees and less political, and only university staff and students are allowed on campus.

overseas news

Dissident scientist wins prize

The Andrei Sakharov Institute in Washington, founded five years ago to promote a campaign for his release and to spread his ideas on peace and democracy around the world, has launched a new venture—the establishment of an annual science prize.

The sum involved is modest, a mere \$5,000 this year. However, it was collected in 10 days mostly from Russian refugees living in the United States and may well be increased in the future.

The first recipient of the award was Dr Alexander Yessenin-Volpin, a former psychiatric prisoner of conscience in the Soviet Union.

Announcing it, Mr Vladimir Bukovsky, a former detainee in a Soviet prison mental hospital, made it clear that the prize had been awarded more for Dr Yessenin-Volpin's human rights activities than for his work in mathematical logic "which no one understands". Nevertheless, Dr Yessenin-Volpin will use the prize to continue his research in this field.

The Sakharov Institute, which has an impressive array of US scholars and academics on its advisory board, has a strong interest in education. It maintains a centre for democracy which disseminates in English the writings of authors unable to express their ideas freely in their own countries. It also has education and research division working simultaneously on the improvement of mathematics and science education in the US and better research in Soviet and East European studies.

The institute organizes an annual conference to celebrate Sakharov's birthday in May to inform the public on the current state of human rights in the Soviet Union.

Guidebook warns of social bias

from Christine Tausig

QUEBEC

A guidebook designed to help researchers avoid treating the sexes differently in their research projects has been issued by the Social Sciences and Humanities Research Council of Canada.

The book warns of the possibility of "omissions, blind spots and biases" which could invalidate research projects and findings. It was written for the SSHRC, which administers federal government funds for university research, by Margit Eichler, a professor of sociology at the Ontario Institute for Studies in Education, and Geannc Lapointe, professor of literature at Université Laval.

Given the titles of the research projects which exhibit an unconscious bias, the guidebook authors point out. For example, it is misleading to describe a study examining social mobility patterns of fathers and sons as "a study of social mobility".

The type of questions asked by researchers may also distort reality, Professor Eichler and Professor Lapointe note. For example, women who are asked if they experience a role conflict between paid work and household labour, which may lead researchers to draw the inappropriate interpretation that only women experience the strain because of the dual roles, the guidebook states.

The book also warns of research tools which can have a different effect on men and women, such as cue cards using only males as illustrations, and suggests that when interpreting findings, researchers must be careful to avoid equating social and cultural differences between the sexes with biological differences.

Canadian researchers must undertake innovative scholarship to draw a more accurate image of reality, the guide adds. For example, viewing the history of North American native people from a female perspective might lead researchers to develop a picture of domestic life rather than only politics, war and trading.

Chinese funding change

by Geoffrey Parkins

China is to abandon state funding of research and is aiming to make most research institutes self-supporting within three to five years.

The management of scientific and technological research and study is to be reformed so that it will be geared directly to meeting the needs of industry and the new "planned market economy". State funding will give way to "commercialization", and projects will be measured in terms of "profitability and growth".

Announcing the latest educational reforms at a national scientific conference in Peking, China's premier, Zhao Ziyang, stressed that if China was to meet the challenge of the worldwide technological revolution, urgent reforms within scientific and technological higher education were essential. The main aim, he said, was to turn all research into economic profitability and growth, and the way to achieve this was to integrate research and production, liberate productive potential and reward success.

In keeping with the Party Central Committee's statements a few days earlier, Mr Zhao said that one of the biggest obstacles was the management of research, which had many defects, the most serious being the separation of research and study from production and too many restrictions on the mobility and effective deployment of talented personnel. Another big problem, he added, was the shortage of appropriately trained personnel, including managerial.

Under the new measures the bureaucracy currently hampering the establishment of close links and coordination between universities and industry is to be swept away. To encourage commercialization, state funding of research will be removed and replaced by whoever is willing to put up the money and take a risk.



Zhao Ziyang: challenge

It is hoped that the prospect of shared economic benefits will stimulate research and effort. Commercial enterprises, research institutes and individual researchers will stand or fall on the degree of success their research achieves in terms of production and profitability. It is hoped that most research institutes will be basically self-supporting within three to five years.

The recently announced removal of the tenure system and the introduction of one year personal contracts for university teaching and research staff will greatly facilitate mobility, efficiency and the effective deployment of staff, it is thought.

The government has also now ruled that scientists and engineers are free to engage in private consultancy and research provided this does not interfere with their contractual commitments.

Mr Zhao said he recognized that the status and remuneration of scientific and technological personnel commensurate with ability and successful performance was a key factor in stimu-

lating growth, and believed that "commercialization" would bring this about.

The new reforms have clearly been received with wide enthusiasm but, as Mr Zhao and the Party Central Committee have acknowledged, there are bound to be problems. The most immediate is a serious shortage of trained managerial personnel. Recent reports state that while large numbers of newly qualified science graduates are swiftly ascending the managerial ladder, very few of them have the expertise and experience that such posts require, particularly in view of the increasing demands that current reforms will make.

Some universities and colleges around the country have already taken the initiative and set-up full and part-time management courses, but realistically, it is likely to be a matter of years before they can produce the quantity and quality of managerial personnel necessary to meet the demands being made.

Another but less immediate worry is that commercialization will cause most funding to be directed only into development or applications research resulting in a situation not unlike that in Japan, where valuable basic research and training is severely neglected, and scientists and engineers lack the basic training and abilities required to produce the new ideas needed to carry Chinese industry forward.

China is clearly in a hurry to move forward, perhaps too much of a hurry for those who remember Chairman Mao's "Great Leap Forward" (1958/60), where the absence of essential expertise, skill and careful planning were ignored in the rush to increase production and achieve economic goals, and which eventually proved to be catastrophic for China and its people.

French to set up OU

from David Dickson

PARIS

The French government is to draw up plans for an open university using a range of modern telecommunications technologies to provide a nationwide system of adult education along the lines proposed six weeks ago in a report by the College de France.

Like the British version, the French scheme is expected to rely heavily on the use of radio and television programmes. In particular it is hoped to make use of the possibilities offered by the European direct broadcast satellites which will be launched by the French-built rocket Ariane next year.

However, France's "Open University" will not be an entirely new institution, but will be created by the modernizing the infrastructure that has already been set up by the national centre for correspondence teaching.

President Mitterrand gave the go-ahead to the project in an address last week to the college, the most prestigious academic body in France whose members are appointed on their intellectual achievements.

He was giving his response to the major recommendations contained in the college's report, focusing on the needs of "the education of the future", which he had asked the academic body to prepare last year at the height of public controversy over the impact to academic standards of the government's reforms of the university system.

Put together largely under the guidance of the sociologist Pierre Bourdieu, but endorsed by all the members of the college, the report offered a strong indictment of many French educational traditions, for example, it highlighted the excessively academic nature of much of the curriculum taught by both schools and universities, the dangers of excessive government control, and the imbalances caused by the growing dominance of scientific and technological subjects.

Carefully skirting round those proposals, which seemed to directly challenge the present government's thinking, President Mitterrand told the members of the college that he was in total agreement with three of the principles that they had identified as essential to the future of education: "unity in pluralism" in order to achieve a form of education which was "as democratic but also as scientific as possible" increasing the amount of contact between educational institutions at all levels and the outside world — and the regular revision of all course content.

President Mitterrand also announced that he was specifically asking the government to take action on three of the report's recommendations. These were the sorting up of a new university, the creation of a new television channel dedicated to educational and cultural programmes, and the evaluation of French schools along similar lines to those which have already been established for the university sector.

The college had suggested that an open university, inspired by the British experience and drawing heavily on the possibilities offered by new telecommunications technologies, might take on a "European vocation" by using broadcasting satellites.

Exam protest by medics

from Barbara von Ow

MUNICH

Thousands of medical students went on strike at West German universities last week to demand a revision of this year's interim medical exam which was failed by nearly 43 per cent of all candidates.

According to the Association of German Students (VDS), which had initiated the action, 20 of the 28 medical faculties in the country were involved in the three-day protest.

More than 20,000, or over 30 per cent of all registered medical students, had voted for the strike as a means of protest against the "scandal exam" last March, which 2,388 out of 5,675 candidates failed to pass, the association said. It underlined that many students suspected that the result had been officially rigged so as to stem the growing glut of doctors in the country.

In Frankfurt, where 52 per cent of the candidates failed, a medical professor told a student rally that he had submitted the questions to a number of colleagues and that they would all have been unable to pass this year's exam. Several experts have said that a number of questions were unanswerable.

The opening reception of the standing conference of European ministers of education, in Brussels earlier this month, was unaccountably delayed. Delegates about to go in to dinner at the Hilton were unceremoniously hustled downstairs to the foyer, where they muttered disapprovingly for quarter of an hour, before finally being ushered into the dining room.

It was revealed much later that an unattended briefcase had been spotted, and in a Brussels understandably nervous of terrorist attacks, the police had been instantly summoned.

The episode could not have ended with a greater anticlimax: the brief case was found to belong to that most pacific of delegates, the representative of the Holy See.

It was an apt introduction to the conference. Observers may have anticipated the dramatic, but what emerged was in the main familiar pious lingo and any generalizations.

The Council of Europe was founded in 1949 to work for closer European unity, to protect democracy and human rights and to improve living conditions. It is the largest European political institution, with 21 member countries: the UK, France, West Germany, Ireland, Belgium, the Netherlands, Denmark, Norway, Sweden, Switzerland, Spain, Portugal, Iceland, Italy, Greece, Austria, Luxembourg, Liechtenstein, Malta, Cyprus and Turkey.

But it has no power to order action from its members and the education conference's resolutions seemed to have been watered down to the lowest common denominator of what governments would be prepared to implement.

That is not to discount the conference on vocational education. The education ministers had not come to Brussels to make policy, but their discussion, both formal and informal, will have a substantial effect on their government's future education policies.

The conference's main theme was "Education and training for 16-19 year olds: problems and prospects", and it was striking that all the member states were preoccupied by very similar concerns.

Social, economic and technological change was creating a need for new education for young people throughout Europe. It was agreed. And the teaching profession did not only carry out its traditional task of imparting knowledge, but must also train and develop skills in young people to enable them to cope with these new conditions.

The Council of Europe's secretary-general, Mr Marcelino Oreja, began by reporting the bleak statistics that there are some 18 million people unemployed in the member states, 40 per cent of those without work in a number of countries. Democracy itself was in danger, he maintained, when young people were always believed to be in danger of losing their education led to good job prospects began to doubt the value of education and training because of unemployment.

No young person should have to face unemployment of leaving school, he said, and he urged all member countries to guarantee to give all 16 to 19-year-olds education, training or job opportunities.

But there was a tension over the implications this had for education. It was stressed many times that the education system was not responsible for unemployment. But the conference almost protested too much on this point and a major concern of many delegates was that education linked more closely with training should provide better job opportunities and be able to cope with economic problems.

However, several representatives spoke strongly against adopting a too narrowly utilitarian view of education. Mr Maria Tereza Gouveia, vice chair of the Council of Europe's council for cultural cooperation, warned that education was not merely training for a job, but the foundation of choice and change.

Education was a means of helping personal fulfilment, which was not automatically ensured by getting a job. Everyone accepted that the main things were not simply an element of production, but the issue was whether a job-trained young person was training but unemployed, or whether a young man and woman would find a chance of achieving something, satisfaction, especially when looking for a job.

Such optimism, a contrast to the widespread gloom elsewhere; reflects the buoyant mood of the offshore economy of 30.7 billion kroner (2.5 billion) of government revenue in 1982 alone.

The period of crisis and change, it was suggested, was not over yet.



Plenty of sound but no fury

Olga Wojtas on the conference of European education ministers

Ploum hopes: M Paul van den Berghe (above, second right), representative of the Holy See, flanked by fellow delegates. (Right) Mr Allan Stewart, Scottish Office minister for industry and education, who led the UK delegation.

was extremely dangerous to make training too functional or too directly dictated by economics, he warned. If one listened to industry more than anyone else, there would be employment for the best, but society must provide for the weak and the meek whom industry ignored.

An issue which delegates had not so far considered, he added, was that many young people and young teachers had profound doubts and fears about being integrated into our present society. Perhaps these anxieties were irrational, but it was vital to talk to young people about their views, something else the conference had omitted to say. Obviously there were considerable repercussions for training when the young had an ethical block about being trained.

The conference's resolution did finally agree that education and training must equip 16 to 19-year-olds to lead a fulfilling personal life, develop self confidence, but clearly most delegates felt change must come in the education system, not in society itself.

The leader of the UK delegation, Mr Allan Stewart, the Scottish Office minister for industry and education, had reason to be doubly pleased by the final resolution. For not only did it conclude, in essence, that all countries should create a Youth Training Scheme, it also drew heavily on the Scottish Education Department's Action Plan — a radical reform of non-advanced further education introduced this session.

The Youth Training Scheme, Mr Stewart admitted, had been introduced as an expedient to ameliorate unemployment, but the Government now saw it as such. It was now seen as a continuing investment in an industrial future, with almost 400,000 entering training under the YTS in the current year. And from next April, the scheme was to be expanded to a two year course, he told the conference, far ahead of the resolution's call for school-leavers to be offered at least six months' basic training or pre-work experience.

Sir Keith Joseph, the Secretary of State for Education, invited Mr Stewart to lead the Brussels delegation because of the Scottish innovations and indeed the Action Plan aroused considerable interest from other ministers.

The conference's recommended programme of improvement, calling for an analysis of the basic skills needed by young people, new forms of assessment, stressing individual achievements, and greater flexibility including access to higher education, was SED officials crowded, the Action Plan blueprint.

Mr Stewart said later that he believed Scotland was well in advance of the rest of Europe, perhaps by two

years. The Action Plan is undoubtedly the major success of recent years and its principles have been widely supported by Scottish educationists and students.

Other European countries apparently had difficulties in tying together adult retraining and provision for young people, and in assessing courses for 16 to 19-year-olds. The Scottish scheme links curriculum and assessment in a national plan, perhaps facilitated by having a small country, with a highly centralized educational system.

The Action Plan, Allan Stewart explained, breaks down traditional courses into modules of around 40 hours each. While in the past, students were required to complete a full course of one, two or three years before gaining an award, they can now progress from one unit of study to another, gaining credit for each module completed. A new single national certificate has been introduced which will record students' attainments, validated by the Scottish Vocational Education Council.

As well as having advantages for students, Mr Stewart added, the Scottish reforms benefited employers and educational establishments. Employers would be better able to consider applicants given the detailed information on the national certificate. Modules could be added or revised in response to changing needs and courses could be adapted to suit individual employers and trainees.

The modular system helped break down the rigidity of present syllabuses, where almost identical courses being studied in the same institution under different subject headings, he continued. The Action Plan encourages secondary schools and further education colleges to form consortia, making better use of existing resources as school rolls fall.

This fleeting reference to great efficiency of resources was virtually the only time the topic was mentioned during the conference. Perhaps the ministers felt they would be stating the obvious if they said resources were limited.

But they clearly believed that education and training for 16 to 19-year-olds was a means to an end, developing young people's sense of initiative and enterprise so that they saw themselves not only as job seekers but as potential job creators. And the resolutions they passed firmly implied greater funding for young people's education, particularly in the field of teacher training.

Mr Stewart's eulogy will be questioned more than a little in Scotland where there was a high degree of formal equality for women in education, this had not been enough to achieve actual equality either in the educational system or afterwards. It stressed that it was essential for countries to collect statistical data in order to discover the true position of girls and women in education.

But Ms Cels-Offormans reports that six years later very few countries have produced figures detailed enough to allow reliable conclusions to be drawn from them. They do show, however, a slight increase over the past decade in the number of girls in general secondary education, now around half the school population in most countries. But the number of women reaching higher education is rising, this is also true of men. "Women are not yet catching up," writes Ms Cels-Offormans.

Lecturers complain that the programme has been developed on their kitchen tables, and are currently threatening industrial action if they are not allowed more time for preparation and assessment.

The Scottish National Union of Students doubts the credibility of the new national certificate in the eyes of employers and higher education institutions and claims that modularisation has simply meant splitting up existing courses into short units without reviewing the curriculum. Poor guidance is limiting students' choice, propelling them towards mainstream courses, the union says.

Neither did Mr Stewart tell the conference that educational development has been somewhat hampered by Scotland's six-month-old teachers' strike in support of an independent pay review — although he did mention it privately to one minister who said in astonishment: "You mean your teachers have the right to strike?"

A drawback of a conference attended by government officials is that they are markedly reluctant to admit to problems unless they can assure everyone they are not to blame.

Representatives became glibly glib on the subject of education and equality for girls and women: nobody pretended that equality had been achieved, but at least they were taking some action. How much may perhaps be judged by the background report prepared by Ms Anne Cels-Offormans, an official in the Netherlands ministry of education and science.

In an unsolicited appendix she listed which Council of Europe members had ratified the United Nations convention on the elimination of all forms of discrimination against women. Only seven of the 21 have signed: Austria, Denmark, France, Greece, Norway, Portugal and Sweden.

A statement issued by the standing conference in 1979 pointed out that while there was a high degree of formal equality for women in education, this had not been enough to achieve actual equality either in the educational system or afterwards. It stressed that it was essential for countries to collect statistical data in order to discover the true position of girls and women in education.

But Ms Cels-Offormans reports that six years later very few countries have produced figures detailed enough to allow reliable conclusions to be drawn from them. They do show, however, a slight increase over the past decade in the number of girls in general secondary education, now around half the school population in most countries. But the number of women reaching higher education is rising, this is also true of men. "Women are not yet catching up," writes Ms Cels-Offormans.

Member states report few initiatives designed specifically to help girls enter the labour market, although they face much greater problems finding a job than boys, particularly if they have had a low standard of typically "female" education.

There was general agreement that promoting equality was a much more complex issue than had been realized six years ago. Two main problems were cited: there was often a reluctance on the part of girls to take vocational courses traditionally dominated by boys, and when they did, firms were reluctant to employ them.

A proposal being considered in Denmark at the moment is to give special grants to employers hiring female apprentices. But Ms Nell Ginjaar-Mas, the Netherlands' junior minister for education and science, said since 1979 her country had taken "hundreds of measures" to give girls a better chance, had given employers "lots of money", but very little had been achieved. Inequality did not have one cause, but sprang from traditional expectations throughout society.

Mrs Gomma Huseby, minister of education of Ireland and vice chair of the conference, said equality of opportunity was of vital importance, not only because of the right to personal development of all young people, but the need for countries to make use of the talents of all their population. Irish recommendations for future progress included in-service teacher training courses on eliminating sexism in class.

Ms Ginjaar-Mas agreed later that opportunities for women could be improved through changes in teacher training. A former chemistry teacher, she said the little research which had been carried out showed teachers treated boys and girls differently. Teaching methods in science subjects in particular yielded better results with boys and research is currently being conducted in the Netherlands to see how these subjects can be made more attractive to girls.

Ms Ginjaar-Mas agreed later that making maths, science and technical skills obligatory subjects for all young people in an effort to give girls better job prospects. "I get lots of letters from girls and their mothers who have told teachers they want to study maths and physics. The teachers say: 'Why do it? You're a beautiful girl!'"

Girls might marry, but with a divorce rate of one in three in Holland, that did not imply that a woman would never have to work. And even in a successful marriage, it was important for a woman to be able to be independent, she added.

"We must tell teachers every day in their training, and every day afterwards, that girls are just as clever or as stupid as boys. And girls need vocational training too." It was also vital to appoint more female staff in science subjects to stimulate girls to study them.

Female staff tend to be mainly in the lower echelons of the education system, says Ms Cels-Offormans' report and statistics may even throw an unduly positive light since they draw no distinction between full-time and part-time posts.

There have been few measures to counter the uneven distribution of men and women within the teaching profession and not all of them have favoured women. Norway applies target quotas to men in primary education and Finland is the only country applying quotas to teacher training courses, to ensure a certain percentage of male applicants.

Improved teacher training was also recommended to help another disadvantaged group, the children of migrant workers. Mr Vehbi Dincerler, the Turkish minister of education, youth and sport, stated that most of the problems of migrant children were caused by the highest dropout rate and lowest achievement levels, stems from the tension between their family background and school.

Staff responsible for educating migrant children should undergo special training in intercultural education, with exchange programmes between countries, he proposed.

Appropriately, the next meeting of the education ministers' standing conference, in Helsinki in 1987, will be on "New challenges for teachers and teacher training".

"European teachers feel very bitter at the moment," said one delegate privately. "They feel their governments regard them as supermen and superwomen." With the question of resource obviously a taboo subject, Helsinki is likely to do little to curb unrest.

Last week *The THES* considered the case of those institutions threatened with the closure of teacher education. Today, as the NAB teacher education group meets, Patricia Santinelli looks at what kind of regional and national map NAB's secretariat has been drawing and points to some of the anomalies that the TEG will undoubtedly examine

Colouring by numbers

The National Advisory Body's proposals for teacher education sent out to institutions in April may not appear on the surface to be quite as radical as those of the Department of Education and Science were in 1982.

For then, the department wanted after all to close down 14 institutions and departments to the NAB's current five as well as decimate the secondary BED — this it achieved leaving only seven subjects and only half the number of institutions running the courses.

But even though NAB's intentions may seem milder, there are some glaring anomalies when they are translated into regions and the numbers institutions will be expected to recruit by 1993, especially via the primary BED.

For example the north west region which would cover Chester, Crewe and Alsager, Charlotte Mason, Edge Hill, and St Martin's colleges, the Liverpool Institute and Liverpool and Manchester Polytechnics will have to have reached on a rough calculation some 4,000 primary BED students, or an intake of some 1,220 students a year.

This figure does not account for the primary PGCE or secondary provision which brings the total to 6,000. This is the largest regional provision of all, and one which one would assume it will be difficult for the north west to meet given its current decline.

But the London region, on the other hand, comprising Avery Hill, Roehampton and St Mary's College, Kingston, Middlesex and South Bank polytechnics, and the West London Institute, which might have been ex-

pected to need and coped with extra primary students, and has been given a much lower increase.

Its total primary BED has only been increased from 800 to 925, and its total number of students including secondary by the year 1993 is not expected to be more than 3,000.

The interesting question is what is the NAB's strategy since it is unlikely that teacher training in the region could recruit such a number of students in competition with other courses as there are not currently enough young people in the system to do so.

One suspicion is that the NAB's plans for public sector higher education will involve a massive closure of arts, humanities and social sciences courses, so as to "force" young people into teacher training.

Possibly this is why the Council for the Accreditation of Teacher Education is currently insisting that two years of subject studies must be the norm in the BED. This would enable a much broader training, suitable for those not intent on being teachers. Undoubtedly it could lead to uncommitted teachers and deprofessionalization.

Another possible solution is that the NAB, facing the problem of implementing a massive increase in primary numbers, as recommended by the Advisory Committee for the supply and Education of Teachers, will merely allocate these, leaving the argument to take place locally in the institutions.

This will undoubtedly leave the onus of not increasing places to individual colleges and polytechnics some of which will be unable to recruit. This

only needs a combination of lack of students, a large target for both the primary BED and shortage subjects, as well as the prospect of cutting back other programmes radically.

One way the NAB could lessen institutional fears about cutting back other programmes would be to insist on additional funds to allow at least the 1985 expansion of teacher training. This would enable the teacher training exercise and the review of public sector higher education to take place at the same time, thus leaving colleges and polytechnics with little doubt as to what they might gain or lose.

But certainly one aspect which the NAB seems to have been unwilling to look at is how the competition within regions will affect the chances of institutions to which they have given large increases to recruit.

For example in the north west, where every institution has had a fairly large increase in its primary provision, apart from Manchester, the college of Crewe and Alsager, considering its catchment area and its position will be forced to compete for students with Chester and Manchester and Liverpool polytechnics.

Edgehill College may also face problems as it will probably have to compete with Liverpool Polytechnic and possibly Charlotte Mason and St Martin's College.

The NAB also appears to have carved the map of teacher education for 1993 into big, medium and small centres. The latter, as a group, probably stands the most realistic chance of achieving its targets. In each case, the calculation on an institution's size is based on its 1989 BED intake multiplied by 3.3 years, to which has been added postgraduate numbers and in-services numbers.

On this basis the big centres with capacities of between 1,200 to just below 900 are Brighton, Leeds, Manchester, Sheffield, Trent and Wolverhampton polytechnics, Avery Hill, Crewe and Alsager, Ripon and York St John and Roehampton Institute.

Out of these it is likely that Manchester, Brighton, Sheffield — with possibly some struggle in certain areas — and Trent — provided it can recruit all its home economics and craft design and technology students — will actually get their numbers. Wolverhampton Polytechnic, as a newly created big centre of teacher education with West Midlands College, however, faces competition for its primary recruitment, as well as in meeting its high targets for the shortage subjects of craft, design and technology — and business studies in the secondary BED.

Avery Hill and Roehampton are both likely to recruit to their respective figures because of their position in the London region. Crewe and Alsager on the other hand, as mentioned before, faces quite a lot of competition in its region and will have to increase its provision in the shortage subjects of business studies and CDT by a substantial amount.

Ripon and York St John also face the problem of having to meet fairly high targets in its CDT provision both in the BED and the PGCE. However should North Riding College really be forced to close, it would ultimately profit from this.

The list of medium centres is made up of those expected to achieve sizes of between 600 to 800 and is of course twice as long.

It covers Bristol, Liverpool, Middlesex and Sunderland polytechnics, the colleges of Bath, Bedford, Bulmershe, Christchurch, Edgehill, Homerton, King Alfred's, Liverpool Institute, La Sainte Union, Newman, Westhill, St Martin's, St Paul and St Mary's, Trinity All Saints, West Sussex, West London and Worcester.

Out of these one could assume that Liverpool Institute and Newman Westhill will have no problem recruiting again, because of their "ecumenical connection". But both Sunderland and Bristol will face difficulties created by having to recruit in the shortage subjects. Sunderland has to find 60 secondary BED business studies recruits each year and 45 in CDT and Bristol has similar problems.

The smaller sized institutions which it is generally thought will have little

Type	Institution	Total Primary 85	89	Total Secondary 85	89	Grand Total 85	89	Difference
Polytechnics	Birmingham	105	125	115	103	220	228	+ 8
	Brighton	140	205	185	215	325	420	+ 95
	Bristol	150	210	95	120	245	330	+ 85
	Kingston	130	165	30	20	160	185	+ 25
	Leeds	120	160	180	195	300	355	+ 55
	Leicester	50	80	50	48	100	128	+ 28
	Liverpool	210	220	257	287	467	507	+ 40
	Manchester	110	115	120	120	230	235	+ 5
	Middlesex	95	130	65	110	160	240	+ 80
	Newcastle	150	180	—	—	150	180	+ 30
	Oxford	180	220	155	215	335	435	+ 100
	Sheffield	80	80	60	70	140	150	+ 10
	Southbank	80	160	80	105	160	265	+ 105
	Sunderland	180	235	95	200	275	435	+ 160
	Trent	180	280	130	180	310	460	+ 150
	Wolverhampton	1,840	2,551	1,767	2,218	3,607	4,770	+ 1,163
Voluntary Colleges	Bishop Cleeve	140	200	—	—	140	200	+ 60
	Chelmsford	110	181	20	—	130	181	+ 51
	Christchurch	155	181	52	70	207	251	+ 44
	Homerton	130	190	92	95	222	285	+ 63
	King Alfred's	165	211	77	30	242	241	- 1
	La Sainte Union	180	250	—	—	180	250	+ 70
	Liverpool Inst.	235	277	90	105	325	382	+ 57
	Newman	210	261	10	15	220	276	+ 56
	Westhill	160	223	78	95	238	318	+ 80
	Ripon & York	390	435	157	120	547	555	+ 8
	St Paul & St Mary	135	180	99	76	234	255	+ 21
	St Martin	125	181	82	115	207	296	+ 89
	St Mary's	70	114	105	120	175	234	+ 59
	Trinity	110	161	85	130	195	291	+ 96
	Westminster	110	161	35	50	145	201	+ 56
	West Sussex	125	165	60	115	185	270	+ 85
		2,540	3,361	1,042	1,135	3,582	4,496	+ 914
Maintained Colleges	Avery	140	175	147	180	287	355	+ 68
	Bath	130	161	125	125	255	286	+ 31
	Bedford	70	124	95	125	165	249	+ 84
	Bradford & Ilkley	140	150	20	30	160	180	+ 20
	Bretton Hill	75	121	95	119	170	240	+ 70
	Bulmershe	160	240	30	35	190	275	+ 85
	Charlotte Mason	110	155	—	—	110	155	+ 45
	Chelmer	110	171	—	—	110	171	+ 61
	Crewe & Alsager	135	198	130	205	265	403	+ 138
	Derbyshire	145	181	10	—	155	181	+ 26
	Edge Hill	220	258	47	40	267	298	+ 31
	Humberdale	80	110	40	—	110	110	—
	Nene	140	171	—	—	140	173	+ 33
	Rolls	145	210	15	—	160	210	+ 50
	West London	130	165	77	100	207	265	+ 58
	Worcester	85	134	100	165	185	299	+ 114
		2,015	2,722	931	1,104	2,938	3,828	+ 890

Note: These intake figures have been compiled from those sent out to each individual institution.

problem in recruiting to size have a capacity ranging between 400 to above 500. They are the polytechnics of Birmingham, Kingston, Newcastle, Oxford and South Bank, and the colleges of Bradford, Bretton Hill, Bishop Grosseteste, Chelmer, Chester, Derby, Rolle, St Mary's and Westminster.

In addition below these numbers are institutions like Leicester Polytechnic, Charlotte Mason and Humberdale colleges. Both in fact have smaller provisions than the threatened North Riding College and Portsmouth Polytechnic.

Again compared to the 1982 exercise, very few institutions have actually lost any provision, but there has been the removal of secondary courses in both the voluntary and maintained colleges sectors.

Under the NAB's proposals, by 1989 if not in 1985 the following will have lost their secondary PGCE — Chester, St Paul and St Mary's, Derby and Rolle colleges. Others, like Roehampton lose their secondary BED as does Bretton Hill, while Humberdale has lost both secondary routes. All the gains by 1989 will have been through increases in the primary PGCE, such as at Sunderland Polytechnic and the colleges of Bedford, Chelmer, Chester, St Mary's and West London.

As far as sectoral provision is concerned by 1989, the largest teacher training provision will be in the polytechnics, around 4,799, followed by the voluntary colleges with 4,496 and the maintained colleges with 3,828.

By 1989 however the largest primary provision will be in the voluntary colleges, with intakes of 3,361, followed by maintained institutions (2,722) and polytechnics with 2,541. The increases in each sector follow this pattern broadly, 821, 707 and 621.

The increases in primary provision have been mainly achieved through the BED rather than the PGCE in the case of all three sectors.

As a result, if these increases go through and are accepted by institutions, the largest primary unit could be at Roehampton Institute with intakes

of 435, followed by Wolverhampton Polytechnic (280), Liverpool Institute (277) Newman/Westhill (261), Edgehill (256), and La Sainte Union (250). Out of these Roehampton will also have the largest BED and PGCE provision, 285 and 150 respectively.

As far as secondary provision is concerned, the largest units will be in the polytechnics (2,218), followed almost equally by the voluntary and maintained colleges with 1,135 and 1,104 respectively.

The increases in secondary provision have again been achieved via the BED, with the largest of the rises being in the polytechnics, some 420 places.

The largest provision in the secondary BED will be in Sheffield Polytechnic (247), followed by Leeds and Liverpool Polytechnics, Avery Hill, and Crewe and Alsager Colleges all with figures of 125.

As far as the secondary PGCE is concerned, Manchester Polytechnic leads with (247) intakes, followed by Ripon and York (120), St Martin's (115) Bretton Hill (119) and Bishop Polytechnic (110).

Within that there are some anomalies and possibly worrying factors for some institutions. The secondary BED in the shortage subjects of CDT, home economics and business studies is largely in the polytechnics, which also seem to have a large share of such courses in the secondary PGCE. The provision in the maintained and voluntary colleges is more concentrated in fewer institutions, but with some large targets.

As far as subject breakdown is concerned some nine institutions have lost the PGCE in English and several of them in maths mainly in the voluntary sector.

In addition science and religious education have been removed respectively from six institutions, science mainly in the voluntary colleges and polytechnics and religious education mainly in the voluntary sector.

Provision has however not been lost but transferred. If the increases made at St Martin's and St Mary, Worcester and West Sussex can be used as indicators

The only news is bad news

Ngaio Crequer reports on the latest in the UGC planning exercise

The only news aspect of the latest of the demands for university cuts is that this time there is no end in sight.

In 1981, for all the trauma it created, universities believed that if they could negotiate their way through the three year period of contraction, level funding would be their reward at the end of it.

Now the University Grants Committee has told the universities that the Government has refused to accept their request for truly level funding and they must plan for an annual per cent cut in real terms.

There is no safe horizon in the distance, rather the reverse a funding policy that will get increasingly selective, a refusal by the Government to provide for long term financial planning as recommended by the Jarratt efficiency study and a system of cash limits which is totally exposed to the ravages of inflation. UGC assumptions on inflation for the planning exercise are already around 2 per cent below actual inflation.

Of course, at the moment the great UGC planning exercise is just a series of questions. The hard work will be done between November and May.

And it is interesting to see that the letter that finally emerged was a lot softer and less specific than earlier drafts. For example, the original intention was to ask for university reactions to an alternative resource hypotheses, say cuts from 1.5 to 3 per cent in real terms every year.

But the UGC was mindful that when they last put questions in such a way, in 1979, when they asked what would be the effect of a 5 per cent reduction over three years, universities simply refused to answer. Such a cut was unthinkable.

Then there was speculation over the extent to which universities should be encouraged to change the balance between the sciences, between research and teaching, and between undergraduates and postgraduates. The letter offers no signposts and is quite clear that universities must be free to choose their own directions, although market demand should be borne in mind.

One of the next letters to come out of Park Crescent will be on rationalization of courses and departments. The first version, a letter to Mr Maurice Shock, chairman of the Committee of Vice-Chancellors and Principals, was very strongly worded, requiring decisive action from the universities.

But somebody at the UGC remembered that constitutionally the CVCP cannot tell the universities to do anything, and so the letter is being rewritten. When it comes, it will be very general, and will not identify particular departments for closure.

The probe by UGC subcommittees into small departments is going very slowly and some committees have more enthusiasm for it than others. In modern languages, a number of universities are tidying up their structures, combining departments into schools and centres and some academics have moved from one institution to another. But the change is very piecemeal.

No great progress on distribution of numbers

Hard decisions on student numbers have not been made between yet. First, no great progress has been made between Sir Peter Swinnerton-Dyer, UGC chairman, and Mr Christopher Ball, chairman of the board of the National Advisory Body, in their talks on the distribution of numbers between the two sectors.

Although they have established some common ground, both have been waiting for the Green Paper on higher education to see if Department of Education and Science assumptions on demand have been revised further. There is no going back to protect the use of resources (spending per student) at all costs, the principle so beloved by previous UGC chairman Sir Edward Parkes.

Initiatives made by Sir Keith Joseph, Secretary of State for Education and Science, inviting the universities to take more students for the same



Sir Peter Swinnerton-Dyer, UGC chairman and Brian Taylor, secretary general of the CVCP: how long will they remain side by side?

money, damaged that principle irrevocably.

Although three universities (Parkes) Leeds being one of them) subsequently refused to be bought in this way, and some other universities may not have taken all the extra students they said they would, most put public demand for more university education above the "maintain standards as they are" line.

The "shift" or "switch" to engineering and science is a further dent because the UGC has to contribute money from its recurrent grant to provide for the additional places.

The NAB is also putting pressure on the university sector to take more students and the inter-sectoral comparison of costs which will show a big squeeze on spending per student in the public sector, will increase that pressure.

Relaxation of quotas is inevitable, but not till next year, and much will depend on what the universities say they want. Relaxation of postgraduate numbers has already taken place.

A new element in the UGC letter is that universities will be asked to comment on departmental unit costs and on staff student ratios, with the implication that those outside the average should be asked to account for themselves.

Universities will find this particularly difficult and will argue that there are justifiable differences between univer-

sities in the teaching costs of similar subjects. People and departments teach subjects in different ways. Even with a 37-subject categorization, physics could mean nuclear physics at one university and optics at another.

It is worth recalling a previous occasion when the subject came up. In March 1981, when Sir James Hamilton, then DES permanent secretary and Sir (then Dr) Edward Parkes appeared before the Public Accounts Committee. Sir James told the PAC there were good reasons for quite large differences in staff/student ratios between universities. He was sceptical about setting norms: one would only end up with a large number of norms, even within one subject, to take account of legitimate differences of approach.

'Control of money more satisfactory than control of staff'

Parkes said he would deprecate any setting of norms as departments with apparently unfavourable ratios would press their claims to be brought up to the norm. "We in the UGC believe that the control of money is more satisfactory than the control of staff," he said. The UGC was not a staffing committee. The ratios at any one

university were the result of decisions taken by it in the light of its resources as agreed by the UGC and they were not in themselves indicators of over or under financing. The staffing of academic departments was only one of the factors used to make general assessments of a university's performance, he said.

Finally the UGC letter asks numerous questions about research plans and machinery but gives no real clues as to how the selectivity policy will work. All it does is to reassure universities that decisions about which areas will be favoured have not yet been made. Reduced Government funding will make it more difficult to implement the selective research policy, as the UGC has recognized. One of the issues it raised with the CVCP before issuing its letter was "how to (present) a careful and deliberate approach so as to satisfy the Government that the committee is carrying out its intention to be more selective".

Another was how to reconcile such an approach with the planning cycle for the allocation process, enabling revisions and adjustments to be made without requiring the full submission of revised research plans.

Neither of these issues are broached in the letter. Sir Peter Swinnerton-Dyer may discover, as the says, that "there are more questions than answers, the more I find out the less I know".

David Jobbins looks at the issues confronting Natfhe's reconvened race relations panel

Passport to harmony

The college lecturers' union has weathered a few internal storms over the past few years — but none as acrimonious and potentially explosive as the Fernandes affair.

The spectacle of the leadership publicly casting one of the few black members of the National Association of Teachers in Further and Higher Education ostensibly over a failure to support a resolution on race relations, was a deeply unsettling and profoundly upsetting not only to black teachers but to a large number of union activists.

At the end of the day, at its conference last year, the executive was absolved of blame for its handling of the affair, in which John Fernandes was excluded from the Hendon police cadet school for drawing public attention to *prima facie* evidence of racism among recruits.

But the episode left a nasty taste in the mouths of many delegates and gave a substantial boost to supporters of a comprehensive package to aid the union in the fight against racism.

Natfhe's policy commitment to opposing racism was reaffirmed in 1976, in a relatively uncontroversial preamble to a more contentious motion on affiliation to the Anti-Nazi League. The ANL campaign overshadowed the rest of the agenda, the issues blurred by the political nature of the permitted package to aid the union in the fight against racism.

But the episode left a nasty taste in the mouths of many delegates and gave a substantial boost to supporters of a comprehensive package to aid the union in the fight against racism.

Natfhe's policy commitment to opposing racism was reaffirmed in 1976, in a relatively uncontroversial preamble to a more contentious motion on affiliation to the Anti-Nazi League. The ANL campaign overshadowed the rest of the agenda, the issues blurred by the political nature of the permitted package to aid the union in the fight against racism.

But the episode left a nasty taste in the mouths of many delegates and gave a substantial boost to supporters of a comprehensive package to aid the union in the fight against racism.

Natfhe's policy commitment to opposing racism was reaffirmed in 1976, in a relatively uncontroversial preamble to a more contentious motion on affiliation to the Anti-Nazi League. The ANL campaign overshadowed the rest of the agenda, the issues blurred by the political nature of the permitted package to aid the union in the fight against racism.

approach from various perspectives, based either on ideological commitment or direct experience of the response of black youth to its implementation in the colleges.

The underlying cause of discontent surfaced in Natfhe at its 1983 conference, when there were unsuccessful but powerfully argued attempts to extend multiculturalism to add curriculum-wide anti-racist teaching.

This debate and the Fernandes row, then at its height, added urgency to the demands for a revised positive statement of union policy.

Circulated in May 1984, on the eve of the Birmingham conference at which the Fernandes fireworks were expected, the draft document accepted the existence of institutionalized racism — the view that despite the best intentions of college and its staff, inherently discriminatory practices were passively perpetuated in a network of interlocking ideological and structural factors.

The dramatic impact of these factors is demonstrated by the few black teachers in colleges, especially in promoted posts. If Ron Anderson, the Labour chair of governors, has his way Kilburn Polytechnic, ironically John Fernandes' own college, could be the first to appoint a black principal.

But it is a big if, apart from any political problems, always a near certainty in Brent's educational history, the pool of qualified black teachers on which to draw is tiny, although the evidence is almost entirely anecdotal, no one seems to be aware of any black vice principal, and the number of heads of department can be counted on the fingers of one hand.

Of course, Kilburn if it

The investigations of many of the phenomena described here, and particularly those within active galactic nuclei, are likely to make unprecedented progress next year with the launch of the large space telescope from the Shuttle.

Imagery, with an angular resolution one tenth of that of an arc second, will allow the wavelength range from the ultra-ultra-violet to the visible, is promised— in which case, completely unique and revealing views of all sources, that are one hundred times better (by area) than achieved at present, will be obtained. Ground-based, optical, telescopes whatever their size, are limited to a resolution of around one second of arc by the blurring of the Earth's inhomogeneous and variable atmosphere.

Currently, all astronomers are keeping their fingers crossed for the success of this vital mission and the chance to view more clearly the violent events within our universe.

The author lectures in the department of

Is history still relevant? Alan Bullock argues that historians must demonstrate the significance



"History" - in English at least - means two things: the systematic study of the past, and also the object of the historian's study, the past itself. But in our modern age, characterized by revolution and by dramatic accelerations in the rate of social change and in the scale of human ability and need, is either history or the past itself still relevant?

Writing in *fin de siècle* Vienna, Carl Schorske remarks that in the last hundred years the word "modern" has come to distinguish our perception of our lives and times from all that has gone before. "The modern mind has been growing indifferent to history because history, conceived as a continuous nourishing tradition, has become useless to it."

The decisive break came in the years at the end of the nineteenth century and the beginning of the twentieth. That remarkable burst of creativity in the arts and literature, in science and social criticism described as the Modern Movement, created the patterns of an unhistorical culture. To many people, the past appears no longer to have any relevance to this crowded, secularized, highly organized, technological, dependent world and has become - like the arts - no more than a relaxation from the serious business of life. It is perfectly possible to be interested in the past for its own sake; most historians are. Others may see the past as a refuge from the pressures of the present. But history will never again be a living part of our culture if historians cannot show the relevance of the past not only to the present but to the future.

The most intractable political problems of our time have deep historical roots. The tensions of present-day Poland are incomprehensible without some account of the centuries - old hostility between Russians, Poles and Germans; without knowing in mind the many divisions and tensions the country has suffered without understanding the extraordinary position of the Catholic Church in Poland. At the opposite side of Europe, the troubles in Northern Ireland cannot even be described except in historical terms. The British and European empires have been dismantled but two thirds of the globe is still profoundly affected by the historical experience of colonization and imperialism, both in international relations and in domestic politics. History is often dominated by the military frontiers and groupings left behind by the former imperial powers. In South Africa, the claim of the black majority to self-determination is blocked by the descendants of the original Dutch Calvinist settlers who have successfully defended their position and traditions against Africans and British alike for 200 years. Apartheid is a historical process.

Nuclear weapons may seem a new term in the algebra of war. But the framework in which such weapons are deployed is inherited from the past, from the nation states whose international relations continue to be dominated by competition, suspicion and rivalry.

No amount of well-meaning rhetoric about the need for controls and disarmament has so far succeeded in removing the fear created by this

combination of something as old as the practice of power politics.

This is not a doctrine of historical determinism, for the future cannot be predicted on the basis of "history". It is always an unstable mixture of the predictable and unpredictable, but the predictable elements - for example, the resistance to change - are in large part derived from the past.

In this century there have been two massive efforts to abolish the past and make a new start: the Bolshevik revolution of 1917 and the Communist revolution in China, leading to the establishment of the People's Republic in 1949. Each of these revolutions was made at an incalculable cost in human suffering, not only in the initial seizure of power and civil war, but in the second revolutions: Stalin's collectivization of agriculture and the purges of the 1930s; Mao's Cultural Revolution in the 1960s.

Paradoxically, such revolutions were carried out in the name of a Marxist philosophy of history which, their leaders claimed, justified them in taking such ruthless measures in the

The desire to obliterate the past is a strong one... but it is not so easily got rid of.

certainly that they were acting as the agents of history and speeding up an inevitable process that would finally liberate man from the past.

No one can question the immense changes that have been effected - and who can tell what the future will bring? But I do not believe that either regime has succeeded in abolishing the past. In both cases it has found expression in resistance to change. Stalin's determination to break the resistance led to the forced collectivization of the peasants, 1929 to 1933, at a cost in life put at anything between five and ten millions. But the true cost was much greater: the peasants were cowed into submission, but 50 years later the low level of agricultural productivity remains the problem which no Soviet leader has been able to solve or disguise.

More important still, the methods of totalitarianism used first against the peasantry and subsequently extended to the Communist Party itself and the Red Army, corrupted and distorted the revolution to a degree from which the Soviet Union is still unable to free itself. Far from abolishing the past, an ostensibly revolutionary regime has added an additional layer of history which has made the task of adapting to change much more difficult.

In China nothing strikes the vision so much as the fractures with which the Chinese leaders discuss the change of course, which they believe will avoid the trap in which the Soviet Union is trapped. To achieve modernization, they have thrown away the stratagem of ideology in favour of a pragmatic

and eclectic approach compatible with their own historical traditions.

Last November, in private conversation, President Li Xiannian (like Deng Xiao Ping, a veteran of Mao's Long March) described their mistake as "working against the grain of Chinese history"; in future, he said, they would work with it, a striking recognition that even after as sweeping a revolution as the Chinese, the course of history would continue to be marked by the same ill-assorted mixture of elements as the past had been.

The point is not limited to revolutions from the left. In Iran, the Shah and his advisers, bent on the modernization of the country in a single generation, ignored the strength of the country's Islamic traditions and were destroyed in the collision that resulted.

This is not to argue that the past is a justification for any status quo. The desire to obliterate the past, to sweep away all the muddle, conflict and injustice, is a strong one; but the past is not so easily got rid of. What interests me in studying its continuity with the present is to find more effective ways of introducing change and making it stick. In other words, learning to manage the past. The key lies in paying particular attention to the differing course of historical development in each society and so establishing a relationship with the past which helps to make change more assimilable, instead of trying to pursue the methods of social engineering in a historical vacuum.

Nineteenth century Japan provides the most vivid example of this. Perhaps the most successful revolution of modern times is that which converted an isolated feudal society into the first Asian nation capable of meeting western countries on equal terms. In war, industry and trade, it was deliberately digested, however, to appear not as a revolution but as a restoration of the imperial power which between the early seventeenth century and the mid-nineteenth had been delegated to the powerful feudal family of the Tokugawas, the rule of the Shoguns. This fiction enabled the reformers to avoid repudiating the past and to combine the changes they introduced with some of the most important traditions of pre-modern Japan.

The fact that in the 1930s Japan's energies were directed towards militaristic expansion does not invalidate the argument. For after the disastrous defeat of 1945, the Japanese were able to resume and carry further the process of modernization, a process the Chinese have been struggling to accomplish since 1911.

Three undeniable human characteristics support the contention that, in the future, it is impossible to ignore the past.

First, humankind is the product of an evolutionary process operating through time. Second, each human being requires time for the unfolding of individual characteristics and powers by a process of growth and maturation.

from conception to adulthood. Finally, each human being is dependent, for retaining the knowledge he/she accumulates from past experience and for his/her personal identity, on memory; the corporate identity of whole communities is built up on a collective memory of a shared past.

More than that, as a result of the powers of linguistic communication that human beings have developed, the whole mechanism of evolution has been altered. We are now within a different system from that governed simply by the original Darwinian model of natural selection through the pressures of the physical environment.

If it remains true that, contrary to what Lamarck believed, human beings do not pass on newly acquired characteristics through the physical generational system, they can and do pass on non-genetic information through tradition, education and the processes of socialization (what Julian Huxley called the psychosocial phase of evolution). To quote Sir Peter Medawar, tradition "is a biological instrument by means of which human beings conserve, propagate and enlarge upon those properties to which they owe their present biological fitness, and their hope of becoming fitter still".

These characteristics of the evolutionary process justify a description of man as a creature with a past, a creature not only shaped by, but conscious of and shaping himself by the historical experience, whether on the scale of the individual, the community or the species.

How different the present has turned out to be from what past generations expected

If Huxley, Medawar and the biologists who share their views are right, then human beings will in time adapt to the accelerated speed and increased scale of change and the future will lie within those groups and individuals who are most successful in making that adaptation. This is perfectly compatible with a belief that the best hope of adaptation is not by some sweeping Act of Obliteration which is more likely to increase resistance than to overcome it, but through a better understanding and use of the non-genetical processes and skills which have been transmitted by which newly acquired experience is passed on to future generations. In this, language is our most important resource, an historical growth deeply embedded in the history of the peoples who speak it.

The past, however, need not be seen exclusively as necessarily setting limits to man's freedom. It can also be seen as one of the sources of man's freedom. Most of us find it difficult to think of the future except in terms of an

extrapolation of the present: more of the same.

A sense of the past can break this tyranny of the present by reminding us how different the present has turned out to be from what past generations expected, thereby helping to energize alternative images of the future. One of the most valuable things a study of the past can develop in the mind is what Daniel Boorstin called "a sense of the otherwise" which stimulates the imagination to conceive of a future that may be as different from the present as the present is from the past.

There is no better example of this than the use Hitler made of his own selective version of the past to give emotional force to his vision of the future: his argument, endlessly repeated, that Germany had not been defeated in 1918, but stabbed in the back and betrayed by Jews, Marxists and liberals, who at the same time were undermining traditional German values.

The Communists make a similar use in staking out a unique claim to shape the future, of the Marxist version of history, leading inevitably - history on their side - to the triumph of revolutionary socialism in the industrialized world and of the Marxist-led liberation movements of the third world. If the future is not to be discovered but created, we need to recognize the power of historical myths in helping to project a picture of the future which will rouse the enthusiasm or anger of the masses and sustain the faith and commitment of the elite.

Britain provides a negative example to reinforce the point. In the view of most of her friends abroad, the British are a people too much bound by their past. The difficulty lies in the fact that the British are unable to come to terms with their history. They sentimentalize it; they resent or reject it; they seek it; but what they are unable to do is to grasp its relevance and turn it to use. It is, after all, a remarkable history. Most of us, however, find it a source of confidence. But our past lies so heavily on us that it inhibits our ability to respond to the future. Britain has indeed lost an empire and not yet found a role.

Let me extend my argument from the political to the cultural sphere. The Harvard sociologist, Daniel Bell, has defined human culture as a "conscious or unconscious or unacknowledged continuity and expressing it, defying individual mortality and bridging generations by means of art, myth, symbol, ritual. Any culture that loses the power to grow and add to itself, becoming wholly oriented toward the past, will die. Equally, however, any culture that dissociates itself from the past and has only the shallow soil of the present for nourishment will soon wither too."

The Modern Movement, which flourished between the 1880s and the 1930s, consciously turned its back on and broke with the past. But in its turn it has itself become a part of history. The past has "flowed round" and

of the past to both the present and the future



of the present

absorbed. What was heralded as an irreparable break with the cultural tradition of the west is now seen as an extension and enlargement of it. If this applies to the culture of the past, it applies to the culture of the present.

First, the scope of the subject has been extended to world history, bringing in the history of other peoples besides those of the European nations and their overseas settlements. Second, history has broken out from a preoccupation with governments and ruling classes to recover the history of ordinary people. Social history has not only come to rival political history in the interest it attracts but has developed a whole series of sub-disciplines: urban and rural history; the history of immigrant groups and ethnic minorities; historical demography; the study of social mobility; family history and the history of childhood; working class history; the history of institutions besides history of central government.

When women's studies were first discussed most historians were sceptical that it would ever be possible to find adequate sources. But once the questions began to be asked, rich finds of hitherto neglected and unsuspected material came to light: journals, letters, statistics, medical data, evidence from courts and government inquiries.

The stumbling block is the belief that our experience is unique and that we confront unique difficulties. But we are not unique in feeling that we are unique. In 1789, in 1848, the year of revolutions, in 1871, the year of the Great Exhibition in London; at the time of the Bolshevik revolution in 1917; at the end of the First World War; at the end of the Second; people have expressed the fervent conviction - sometimes optimistic, sometimes pessimistic - that they were entering a new era. And they were right at the time the impact of the new appeared to wipe out the past and disrupt continuity.

Looking back though, one can see that each generation there is always a mixture of the new and the old. The mixture is never the same; history does not repeat itself; the new is not the old; the old persists alongside the new, is successfully grafted. In many countries history is being squeezed out of the academic curriculum by a general loss of interest and a degrading of the humanities. The National Endowment of the Humanities has recently published a report on the situation in the United States which shows that 72 per cent of American colleges and universities have never taught history or literature since 1970. In history since 1970, the old persists alongside the new, is successfully grafted. In many countries history is being squeezed out of the academic curriculum by a general loss of interest and a degrading of the humanities. The National Endowment of the Humanities has recently published a report on the situation in the United States which shows that 72 per cent of American colleges and universities have never taught history or literature since 1970. In history since 1970, the old persists alongside the new, is successfully grafted.

The history of ideas has become a separate historical discipline and the study of *mentalités collectives* founded by LeFebvre has probed the concepts and sensibilities of the literate as well as the educated. Linkages with the past, the history of ideas on the one side, the history of ideas reaching into the sciences on the other, ranging from the influence of Pythagorean ideas and astrology to the revolutions in physics and information technology of the twentieth century.

This burst of innovation in historical studies owed much to the belief that it was creating a new kind of history. The practices of traditional history were attacked as out of date and inadequate. Jobs and research grants were at stake, also ideologies.

What linked the protagonists of the new history - the Marxists, the Annales group, the cliometricians -

never received the attention it deserves in the intellectual history of our time.

First, the scope of the subject has been extended to world history, bringing in the history of other peoples besides those of the European nations and their overseas settlements. Second, history has broken out from a preoccupation with governments and ruling classes to recover the history of ordinary people. Social history has not only come to rival political history in the interest it attracts but has developed a whole series of sub-disciplines: urban and rural history; the history of immigrant groups and ethnic minorities; historical demography; the study of social mobility; family history and the history of childhood; working class history; the history of institutions besides history of central government.

When women's studies were first discussed most historians were sceptical that it would ever be possible to find adequate sources. But once the questions began to be asked, rich finds of hitherto neglected and unsuspected material came to light: journals, letters, statistics, medical data, evidence from courts and government inquiries.

The stumbling block is the belief that our experience is unique and that we confront unique difficulties. But we are not unique in feeling that we are unique. In 1789, in 1848, the year of revolutions, in 1871, the year of the Great Exhibition in London; at the time of the Bolshevik revolution in 1917; at the end of the First World War; at the end of the Second; people have expressed the fervent conviction - sometimes optimistic, sometimes pessimistic - that they were entering a new era. And they were right at the time the impact of the new appeared to wipe out the past and disrupt continuity.

Looking back though, one can see that each generation there is always a mixture of the new and the old. The mixture is never the same; history does not repeat itself; the new is not the old; the old persists alongside the new, is successfully grafted. In many countries history is being squeezed out of the academic curriculum by a general loss of interest and a degrading of the humanities. The National Endowment of the Humanities has recently published a report on the situation in the United States which shows that 72 per cent of American colleges and universities have never taught history or literature since 1970. In history since 1970, the old persists alongside the new, is successfully grafted.

The history of ideas has become a separate historical discipline and the study of *mentalités collectives* founded by LeFebvre has probed the concepts and sensibilities of the literate as well as the educated. Linkages with the past, the history of ideas on the one side, the history of ideas reaching into the sciences on the other, ranging from the influence of Pythagorean ideas and astrology to the revolutions in physics and information technology of the twentieth century.

This burst of innovation in historical studies owed much to the belief that it was creating a new kind of history. The practices of traditional history were attacked as out of date and inadequate. Jobs and research grants were at stake, also ideologies.

What linked the protagonists of the new history - the Marxists, the Annales group, the cliometricians -

was the belief that they were creating a scientific history which would free the historian from the multiplicity of individual events from the realm of the contingent and the subject and uncover the structures of social behaviour and beliefs, the long-term trends of economics, the underlying factors which determine the movement of history.

The dream of the Annales school who, in Jacques Le Goff's words "loathed the tri formed by political history, narrative history and chronicle or episodic history", was what Elie Kedourie has called "a kind of event-free social science, the task of which was to discover the norms of human behaviour".

By the late 1970s, the dream was wearing thin and even the exponents of the new economic history were less than sanguine about making history scientific. Robert Fogel concluded that history was primarily a humanistic discipline and that economic quantitative history, the history of institutions and the history of ideas, was a humanistic synthesis lying beyond the range of social science. In 1979, Lawrence Stone, who had welcomed the assimilation of history to the social sciences, wrote of the end of an era, the end of an attempt to turn history into a value-free, social science that would owe nothing to the historian's experience, understanding and judgement.

But if that ambition had been frustrated, history has gained enormously from the enlargement of its interests and the adoption of concepts and methods developed by the social sciences. And this in turn makes it much more able to stand up to the test of its question: is the study of the past still relevant?

The American critic, Harry Levin, answered that question in one sentence when he wrote: "No form of provincialism is more confining than ignorance of other times than our own; no intellectual exercise can be more liberating than the attempt to look before and after the limits of contemporaneity."

I do not believe that history teaches lessons in the literal sense of that expression - a greater understanding of the human condition, yes; but specific lessons, conclusions which cannot be contested, no. Raymond Aron once said that history seeks to restore to the past, the uncertainty which characterizes the future. The converse is equally true: history restores to the future the uncertainty which it can show characterized the past.

Is this a negative or pessimistic conclusion? Not at all. One has only to substitute for the word "uncertainty" a sense of alternatives or options to realize the value of history in strengthening men's and women's confidence, that there are still choices to be made, still freedom to contribute to shaping the future.

The author was founding master of St Catherine's College, Oxford, and former vice-chancellor of the University of Oxford. This article is a shortened version of a lecture, "Is history still relevant?" which he delivered in Jerusalem earlier this year.

A case of recidivism in higher education?

Colleges, she said, were to expand and diversify. They were to be encouraged, singly or jointly, to develop "into major institutions of higher education concentrating on the arts and human sciences, with particular reference to their application in teaching and other professions". Thus Margaret Thatcher in her 1972 White Paper *Education: A Framework for Expansion*. Colleges of education, as they had been renamed following the Robbins report a decade earlier, had been waiting for full acceptance, in one form or another, into "higher education". Many were to be accepted (whether fully has yet to be seen), and others were to be assimilated at the gate. As the extent of the continuing reduction in teacher education became clear, Margaret Thatcher's invitation was a summons not only to enter higher education, but also to survive.

Teacher education had been on the fringes of a higher education definition since 1944 in particular, when the McNair committee considered their relationship with the universities. Even in 1971 the Association of Teachers in Colleges and Departments of Education had to remind the James committee on teacher education (if its members still needed to be reminded) of the isolation of the colleges and their second-class status. The ATCDE's proposals were aimed "to end this isolation and these distinctions". Although the barriers separating the colleges from the rest of higher education had been eroded since the McNair report, the ATCDE did not underestimate "the difficulties of incorporating the colleges fully into the structure of higher education". The James committee urged greater independence for the colleges - including from the "false academism" and "enervation" encouraged in them by their link with universities. That was the majority view. The minority disagreed not about the academism and the enervation, but about the causes.

The teacher education trap is how it now works. Diversification and amalgamation in the 1970s were not just for cost-effect, they were to de-isolate teacher education. Student numbers in teacher education now need to be increased. Institutions were asked by the Secretary of State and the NAB to increase their teacher education numbers. Those offering to do so have now been faced with an "initial assumption" by the NAB committee that colleges must reduce other courses to balance the extra numbers. Those colleges which have not diversified, of course, have nothing to take away. Colleges and polytechnics which do not train teachers are not affected. Large polytechnics with such increased numbers are planning to nibble away at their humanities courses. Those colleges which did what Margaret Thatcher asked of them in 1972 are to be most affected. Substantial increases in teacher education may mean reductions in other courses to the point that diversification may vanish. Colleges of higher education may, like Secretaries of State and NAB committees, recidivate. The monotechnic may, in fact, be an undeclared ministerial policy. Long-term, rational planning may, after all, be inimical to a daily preoccupation with the state of the market and its forces.

What has been evident for 40 years was the weakness of a college isolated from the academic mainstream and even from constructive inputs from other institutions - including the schools. By the early 1970s teacher education institutions were under massive pressure to change, and to diversify. A famous conference called in 1964 by the Department of Education and Science, opened with a chief in-charge emphasizing that "traditional ways of organizing education, of teaching children and of training teachers are being challenged". Twenty years later, the colleges are unrecognized. Their academic and professional basis are as visibly those of a "higher education" as those of other institutions which live within the definition.

There are still open questions about whether there are significant differences between teacher education in a university, a polytechnic or a college of higher education, or whether there is a One Best Way to prepare teachers. My question here, however, is about the colleges as "higher education". They have had a tough time. When they began to plan degrees, some universities were suspicious enough to refuse to validate proposed honours degrees.

Then came another round of closures and amalgamations. Some were assimilated, not always with enthusiasm, by polytechnics. The diversified colleges of higher education were seen by many polytechnic directors as unwelcome rivals - deflecting resources and complicating their binary problems. As the colleges developed BA, a new scale of in-service education, master's degrees, research, professional training in areas other than teaching, people still called them teacher training colleges. They took "higher education" into their titles, and eventually felt, having done what Margaret Thatcher invited them to do, that Kolch Joseph (and Margaret Thatcher?) regretted it.

If they have been under-financed, under-represented, under-valued, they have looked to the National Advisory Body, invented to supervise their and the polytechnics' financial and course provision, for understanding and equity. If they have not always found them, they have seen the constraints on the NAB's own room for manoeuvre - national budgets set elsewhere, ministerial pressure and more. The colleges have seen their own finances fall prey to the complexities of satisfying the polytechnics. They have seen their arts and human sciences provision, promoted by Margaret Thatcher as Secretary of State 13 years ago, eroded by her Government through the NAB in the 1980s. They have felt and urged the need for the NAB to undertake long-term planning, to establish criteria, to help to shape a system. Signs of such intentions followed the hysterically rapid and savage inroads into public sector higher education which the NAB was compelled to effect in the first three years of its existence. What many of the colleges now see, however, is history repeating itself. The system is recidivous.

The teacher education trap is how it now works. Diversification and amalgamation in the 1970s were not just for cost-effect, they were to de-isolate teacher education. Student numbers in teacher education now need to be increased. Institutions were asked by the Secretary of State and the NAB to increase their teacher education numbers. Those offering to do so have now been faced with an "initial assumption" by the NAB committee that colleges must reduce other courses to balance the extra numbers. Those colleges which have not diversified, of course, have nothing to take away. Colleges and polytechnics which do not train teachers are not affected. Large polytechnics with such increased numbers are planning to nibble away at their humanities courses. Those colleges which did what Margaret Thatcher asked of them in 1972 are to be most affected. Substantial increases in teacher education may mean reductions in other courses to the point that diversification may vanish. Colleges of higher education may, like Secretaries of State and NAB committees, recidivate. The monotechnic may, in fact, be an undeclared ministerial policy. Long-term, rational planning may, after all, be inimical to a daily preoccupation with the state of the market and its forces.

What has been evident for 40 years was the weakness of a college isolated from the academic mainstream and even from constructive inputs from other institutions - including the schools. By the early 1970s teacher education institutions were under massive pressure to change, and to diversify. A famous conference called in 1964 by the Department of Education and Science, opened with a chief in-charge emphasizing that "traditional ways of organizing education, of teaching children and of training teachers are being challenged". Twenty years later, the colleges are unrecognized. Their academic and professional basis are as visibly those of a "higher education" as those of other institutions which live within the definition.

There are still open questions about whether there are significant differences between teacher education in a university, a polytechnic or a college of higher education, or whether there is a One Best Way to prepare teachers. My question here, however, is about the colleges as "higher education". They have had a tough time. When they began to plan degrees, some universities were suspicious enough to refuse to validate proposed honours degrees.



Nevil Johnson
Nevil Johnson is a fellow of Nuffield College, Oxford

126 Buckingham Palace Road, London SW 1W 9JL

BOOKS

Moral reasoning

Essays on Moral Development
by Lawrence Kohlberg
Volume Two: The Psychology of Moral Development: the nature and validity of moral stages
Harper & Row, £32.50
ISBN 0060647612

The dominance of Lawrence Kohlberg's work in the study of moral development is such that few students of psychology or education nowadays fail to know of it. Rightly so, for here we have a life's work of exceptional depth, breadth and relevance to human affairs. As a doctoral student at Chicago in the 1950s, Kohlberg turned to the study of moral reasoning, starting where Jean Piaget had left off, by focusing on the adolescent age-range. His method was to provide carefully constructed hypothetical dilemma stories and to study not so much the moral conclusions of his respondents, as the types of consideration that seemed to be generating them.

From this early work he concluded that in so far as people's moral reasoning develops, it does so through an unvarying sequence of three levels comprising six stages or moral outlooks of increasing complexity and, he claimed, moral adequacy. Thus, from first pre-moral level dominated by concern for negative consequences of action, one then by "instrumental hedonism" at stage two, progress is towards a second-level pair of stages based on convention — first, that of informal niceness, then that of social system ("law and order"). The third, fully moral level, involves stage five, making use of human rights and social welfare as its basic values, and the final, systematic outlook of stage six, embodying the principles of justice as fairness articulated by John Rawls.

Since then, we have seen an increasing systematic theory, utilising the psychological structuralist ideas of Piaget's middle period, the elaboration of relationships between philosophical issues and empirical research, the development of a theory of moral action, the revision of important aspects of the stage formulation, and an associated development of more reliable methods for assessing stages of moral reasoning. This work has been impressively sustained over a 30-year period during which Kohlberg's views have shown both consistency and change, including explicit revisions in the light of evidence, most notably that from a continuing 20-year longitudinal follow-up of the cross-sectional sample of male adolescents studied for his doctorate.

It would have been exceptional to find a psychologist offering such depth and breadth of treatment, including not only systematic research and methodology relating to his central psychological theory, but also attention to the philosophical-definitional

foundations of the domain, as well as practical educational applications in schools and prisons. The fact that these aspects are not merely covered, but also explicitly integrated, makes Kohlberg's work one of the few modern contenders for the title of "grand theory".

If all this were not sufficient to gain him considerable attention, critical interest would have been guaranteed by Kohlberg's rather polemical stance and the provocatively strong claims which have characterized his output at all points: claims that the moral domain is adequately captured by his conceptual taxonomy based on distributive justice; that his sequence of stages is the sole important form of moral development; that later stages are higher stages morally; that his insights into the causal factors in such development allow a moral education that is effective yet not indoctrinatory; and so on.

Attempts at critical appraisal of Kohlberg's contribution are not only obstructed by the usual problems of grand theory complexity, but also by the fact that he explicitly uses some aspects (for example, philosophical) of his work to bolster other aspects (for example, psychological) and vice versa, with the qualifications and cautions tending to get muffled backstage as the Kohlbergian claim chorus is allowed repeated curtain calls. Nor, at a more practical level, has independent judgement been aided by the tendency of his group to refer to unpublished material, the most notorious example being

Kohlberg's complex manual for scoring the stages of moral reasoning, of which there is still no commercially published version.

So the publication in three volumes of Kohlberg's "major writings" was much needed. The precise nature of this collection is, however, not altogether clear. Given that the bibliography of Kohlberg's writings carries well over 100 entries and that he does not skimp on words, some sort of selective selection was inevitable; but the criteria for selection are not explained and in either this or the previous volume. More seriously, we are nowhere directly informed of the sources and dates of chapter originals, and this omission is made more significant by the fact that these originals have been altered to varying extents. Also, given Kohlberg's habitual and deliberate joint consideration of philosophical and psychological aspects, the reference to psychology alone in the title of this volume should be ignored.

In the place to the whole work — reproduced in this volume — Kohlberg tells us that volumes two "represents both my earliest thinking and writing and my latest". This is fair enough as long as one realizes that the earliest piece (chapter one) is the lengthy 1969 handbook *Stage and Sequence*, which is held to represent the formulation with which Kohlberg has been working since the early 1960s. In addition, there is an introduction to this volume, but each part contains its own introduction of at least five pages. Part one contains chapters

dating from 1969 and 1976, whereas parts two and three have chapters of very recent origin, with the appendices presenting the current formulation of what Kohlberg now more modestly calls his "stages of justice reasoning", details of his interview dilemmas, and a presentation of his most recent idea of subtypes or moral reasoning types. In short, this volume presents, with a good deal of repetition, an account of current Kohlbergian thinking, with some coverage of earlier versions. As such, it will be of considerable interest and use to those already familiar with Kohlberg's work; it will, for instance, save them buying Kohlberg, Charles Levine and Alexandra Hewer's 1983 monograph *Moral Stages: a current formulation and a response to critics*, included as part two. Beginners might start with either the introduction or chapter two, using appendices A and B for detail and then going on to chapters six, seven and the remainder.

Appraising the validity of this latest version of Kohlberg's view is more difficult than ever. Although I am impressed by his openness to evidence and willingness to self-correct in the face of it, there remain some important doubts. For all its breadth, the approach remains conveniently selective in various respects. One is the range of critics to whom Kohlberg chooses to respond; they do not, for instance, include such sympathetic intellectual neighbours as Norma Haan in America or Lutz Eickensberger in Germany, or such clear opponents as Tom Kitzwood in Britain and Ted

Trainer in Australia. Moreover, Kohlberg remains somewhat paradoxical in his use of psychological paradigms, referring only to such old chestnuts as the approaches, when the more complex models of cognition and skill that have dominated recent academic psychology and influenced neo-Piagetian approaches receive no mention. Kohlberg's emphasis on moral activity as involving conscious, verbal self-regulation must seriously threaten the scope of his offering: how far are human actions generated by reflective decisions; and of those that are, how many are the product of purely verbal thinking? Similarly, although I welcome the softening of previous claims in the light of the evidence, I would have hoped to see this lesson applied to current contentions which have not yet received empirical assessment to an adequate degree. The issues of developmental subtypes and the place of moral relativism in his scheme are obvious candidates here; even their conceptualization seems to require further work if they are not to engender considerable portions of the remaining edifice.

Nevertheless, the publication of this volume will facilitate such critical appraisal, as well as eliciting admiration for the scope of Lawrence Kohlberg's effort in this basic domain.

Peter Tomlinson

Peter Tomlinson is lecturer in education at the University of Leeds.

using public resources to advance its interests — in other words, of behaving like every other occupational group, including sociology lecturers.

After such innocence came the Fall, in which both left and right proclaimed that things were not really what they seemed. Caring was actually bourgeois; physical treatments were merely punitive (even if they relieved suffering); and supplying acceptable public services was profligate extravagance. Brown is in the left-hand lane of this revisionist movement, though not to the extent of accepting (as many do) "a monolithic arrangement whereby political and economic leaders consciously plan social control mechanisms in psychiatric forms". A pity, then, that he seeks to earn his radical chic by pejorative language and by an ill-researched attack on biological treatments. The whole reference basis of the book is, indeed, seriously flawed.

His claim to provide a "unique" analysis of mental health practices in terms of four structural forces — political-economic, professional, institutional, and popular — also seems ungenerous to the work of such writers as David Mechanic, Murray Levine and Alexander Leighton. Brown's complaint that the medical model "blames

the mentally ill person, rather than the socio-political conditions precipitating the illness" also misunderstands an ethos that is simply not concerned with blame, but with analysis of morbidity in terms of the interactions of organism and environment.

Penetrating these random volleys, however, it is possible to pick out many useful comments on American social policy for mental health: there is little concern with the rest of the world, apart from some poorly informed references to Italy and China. Post-war policy up to the early 1970s was in fact guided mainly by the liberal critique of capitalism, and implemented by a professions-led coalition. Its attitude to the state mental hospitals was largely to ignore them, in the confident hope that they would wither away and release their resources for the new community mental health centres. Brown is right to emphasize that this position involved a failure to decide whether its primary concern was with better services or with major changes in American society.

The left-right counter-attack then undermined both the credibility of the liberal coalition and its money resources. Chronic patients were discharged from state hospitals in huge

numbers, not because there was a better alternative outside but because the states had discovered a way of transferring the cost of their care to federal programmes such as Medicare. Brown is impressed with the radical involvement in "patients' rights" through the courts, although he provides no evidence that any patients were better off as a result: one so concerned with professionalism might have observed that the only people to benefit were the lawyers.

Meanwhile, Brown shows, entrepreneurship had filled the vacuum, and deinstitutionalization became "trans-institutionalization". Private boarding and nursing homes sprang up to accommodate the chronically ill, and soon became the largest single sector of care, usually at a lower standard than that of the state hospitals. The same pressures are now building up in this country, but we have seen the future, and it doesn't work.

Hugh Freeman

Hugh Freeman is senior consultant psychiatrist at Hope Hospital, Salford, and editor of "British Journal of Psychiatry".

Ingenious practices

Reproductive Rituals: the perception of fertility in England from the sixteenth century to the nineteenth century
by Angus McLaren

Methuen, £11.50 and £5.95
ISBN 0416374506 and 374603

P. G. Wodehouse once wrote of the hour in the late afternoon when the shadows lengthen and the mind becomes prey to morbid fancies. There must be few historians who have not in the occasional unprofessional moment felt that history doesn't provide anything and is pretty boring stuff. The answer for the Domes Club member in good standing would undoubtedly have been a quick cocktail followed by another a bit slower; and there is a current fashion to liven up history with a cocktail of sex, feminism and anthropology. If you can think of some pretty dreadful books of this sort, this book is not one of them.

The historical interest in sex is matched only by the fact that of all human activities it is perhaps the one that generates the fewest historical records. To look at fertility in pre-industrial England (the archetypal case, says McLaren) modern cultural anthropology helps the historian avoid simple errors (either biological, the assumption that fertility was "natural" or at its biological maximum) or social (that women were solely the passive victim in the process of reproduction).

McLaren's "anthropologically informed historian" knows where to look for evidence to suggest that the whole business of fertility was subject to a large number of social controls. McLaren does not prove anything of course, but wisely points out that the people of the time believed they were controlling fertility, and in a number of ways. Some of these, we are tempted to believe, must have worked.

The most direct technique was abortion, and against some opposition, that abortion was a major technique of birth control. The great legal and medical interest that is obvious in the west from the Middle Ages onwards was surely centred around the question of when the conceptus became human. There were reasons for religion and natural philosophy for finding a moment when the soul entered the body, and McLaren points to "quickening" as a similar critical moment. Before such a critical point it could be argued that to get rid of the conceptus was not abortion, but a restoration of the menstrual flow; and the huge body of medical literature on this topic gives some notion of its practical importance.

This was a European, not merely an English affair, and although McLaren has deliberately restricted himself to the topic of English fertility, the lack of reference to any Latin sources makes his discussion of these big questions somewhat thin. This is particularly so in the first chapter, which strives to relate Hippocratic, Aristotelian, Galenic and mechanical theories of generation to the question of female sexual pleasure and to resultant fertility. Subsequent chapters on the control of fertility — including attempts to

increase it — are better, and McLaren is surely right that so important a matter as breeding would be subject precisely because it was believed to be more open to modification, to all the ingenuity of which men and women are capable.

The book is about these ingenious practices — rituals — and not (it is necessary to remember) the actual effectiveness of contraception of control for sterility. Although McLaren writes with an eye to the demographers and the question of 18th-century population growth, the book does not have a quantitative argument.

R. K. French

R. K. French is director of the Wellcome Unit for the History of Medicine, University of Cambridge.

The British Psychological Society has published volume five in the *Psychology Survey Series*. Edited by John Nicolson and Hella Bloff, the book is available at £12.50.

A paperback edition of David Premack and Ann James Premack's *The Mind of an Ape* has been published by Norton at £6.25. A review of the hardback appeared in *THES* on June 8, 1984.

A second edition of John H. Flavell's *Cognitive Development* has been published by Prentice-Hall at £20.85.

A second edition of Bryan Kolb and Ian Q. Whishaw's *Fundamentals of Human Neuropsychology* has been published by Prentice-Hall at £24.95.

BOOKS

Puppet physicist

Kapitza, Rutherford, and the Kremlin
by Lawrence Badash
Yale University Press, £20.00
ISBN 0300014651

In 1921 a young Soviet physicist named Pyotr Kapitza arrived in Cambridge and applied to work with Ernest Rutherford at the Cavendish Laboratory. By 1929 Kapitza was a Fellow of the Royal Society. The following year, though still a Soviet citizen, he was appointed as one of the very few Royal Society professors. And in 1933 he became director of the new Mond Laboratory for low-temperature magnetic research, created especially for him. Beginning in 1926, he paid regular, usually annual, visits to his homeland, and although it was indicated that he would be expected to return permanently at some stage, no restrictions were imposed upon him. But in 1934, in the course of such a visit, the authorities decided that his services were now urgently needed by his country, and he was forbidden to return to England.

Kapitza actually shared the ideology of his Soviet masters, but he was not much impressed by their way of applying it. He believed strongly that as a pure scientist he could contribute far more to his country by working in the place and conditions of his choice, and he was not particularly cooperative with the authorities. They for their part seem to have been at a loss to know what to do with him once they had him, and for months there was a stalemate. Kapitza was promised a

new institute and great (by Soviet standards) social and material privileges. The institute was built but not equipped, and the other promises remained largely unfulfilled.

Meanwhile, gentle pressure from Britain to gain his return had no effect. Finally, in the course of 1935, he weakened and gave in, and an uneasy truce was reached with the administration. Arrangements were put in hand for the purchase of much of the Mond Laboratory's equipment (or duplicates) as a foundation for the new Soviet institute. And in a relatively short space of time the Institute for Physical Problems became one of the leading Soviet research centres. Kapitza himself, as director, built upon his Cambridge research and eventually received a Nobel prize for his achievements.

Professor Badash's slim volume centres on the period in 1934-35 when Kapitza was effectively a reluctant, uncooperative and inactive prisoner in his own country. During this period he wrote frequently to his wife, Emma, who had been with him in the USSR but had returned to their children in England when he was detained. Excerpts from these letters were transmitted to Rutherford, and these excerpts form the core and greater part of the book. Three short chapters provide an introduction, and a final chapter presents a very long letter written by Kapitza to Rutherford in 1936, by which time he was reunited with his family and well embarked on the equipment of the new institute.

As a work of history, the book is somewhat casual. The letters are presented without commentary and with a minimum of notes, and the introductory chapters are short and even sloppy. But the letters themselves are interesting. There is, for example, the question of how the issue was handled diplomatically by the British, at a time when relations with the Soviet Union were ambiguous to say the least. More general historical background would have helped here, but Badash does devote considerable attention to the

question, which leads in turn to glimpses of a whole range of wider historical issues.

Another point of interest, and one which permeates the whole book, concerns the problems faced by the Soviet Union in trying to manage pure science within a planned society. Coming through all Kapitza's letters is the message that while the authorities wished to encourage science they hadn't a clue how to do so, and above all how to reconcile scientific genius with political direction. The 1936 letter also shows how Soviet industry was unable to cope with the small and irregular demands for laboratory equipment that the pursuit of science threw up. Again, this takes us into a wealth of historical issues, none of which are taken up in any measure, but several of which are pointed out as subjects for further reflection.

But the central issue of the whole book, and that which most justifies the approach adopted, is the psychological drama of Kapitza's ordeal. Trapped by a system he broadly approved of but the limitations and naivety of which tormented him, he grew bitterly depressed. The fact that he had only one pair of shoes annoyed him, but the bureaucracy that prevented him having another pair angered him. He desperately missed his family (he had already been deprived of one wife and two children by an influenza epidemic), and his work. He spoke repeatedly of turning to physiology and working under Pavlov, rather than be a physicist unable to work for lack of facilities. But it was his physics that he really wanted. Or was it? The psychology of the man was complex, and his state of mind was clearly and understandably disturbed, so there is no reason to take his letters at face value: readers may make their own interpretations.

John Hendry

John Hendry is editor of "Cambridge Physics in the Thirties" (Adam Hilger, 1984).

Cloning cocktail

Understanding DNA and Gene Cloning: a guide for the curious
by Karl Drlica

Wiley, £11.45
ISBN 0471879428

An introduction to Recombinant DNA
by Alan E. H. Emery
Wiley, £6.75

ISBN 0471903639
Gene Cloning: the mechanics of DNA manipulation
by David M. Glover
Chapman & Hall, £15.00 and £7.95
ISBN 0412266008 and 254301

Recombinant DNA technology or genetic engineering is the method by which genes can be cut out of the DNA of one organism, using molecular scissors of exquisite specificity known as restriction enzymes, and incorporated into a carrier DNA molecule called a vector. This recombinant molecule can then be introduced into a second, quite unrelated organism, where it can be duplicated and the foreign DNA molecule allowed to express its genetic potential. By these means, bacteria may be constructed which can synthesise human proteins such as insulin or globin. These three books, though all concerned with recombinant DNA technology, are very different in style and content.

Karl Drlica's book is perhaps the most successful attempt so far to explain genetic engineering to readers with "little or no background in chemistry". This is achieved partly by explaining the whole of chemistry in a few paragraphs and then by the use of molecular diagrams, among which is the cartoon between DNA and a movie film, it can be edited by cutting and splicing, if only makes sense when read in the direction of the arrow.

However, although this often works well, it has limitations. For instance, it cannot convey the importance of the fact that the two parallel strands of a DNA molecule run in opposite directions. Drlica's book is, in fact, a number of errors of fact, including the size of the human genome and the diagram describing restriction mapping. The quality of the diagrams is not as high as the other two books and the text contains numerous typographical errors.

The main portion of Emery's book, an account of modern medical genetics, I enjoyed very much, the chapter on evolution and population genetics always a difficult subject, being particularly good. The first 70 pages, however, could have been put to better use expanding the explanation of particular heritable diseases: sickle cell

anaemia is treated in a very cursory way, presumably because recombinant DNA played no part in its original elucidation; the treatment of the thalassaemias, where recombinant DNA was all-important, is much more detailed. Similarly, in discussing cancers, Professor Emery informs us that the molecular basis of xeroderma, a tumour, an inherited susceptibility to sunlight-induced skin cancers, has been worked out but does not tell us the results; again, recombinant DNA has not yet been of any great importance.

In his wide-ranging account of the prevention and treatment of genetic diseases, Professor Emery has some very wise things to say about genetic counselling but does not allow practicalities to stand in the way of his optimism concerning the prospects for genetic therapy. An excellent description of the use of cloned DNA fragments to detect genetic diseases in embryos gives a real sense of the excitement which gene cloning has brought to the fast-moving field of diagnostic medical genetics. Future prospects are not ignored, with a clear explanation of how recombinant DNA methods could be exploited in clarifying the position of disorders caused by many genes. One small plea: any revision of the book should include a glossary of medical terms in addition to that giving molecular biological ones: it is not only the genetic engineer who manages to obscure his craft with impenetrable jargon.

David Glover's book is intended for a narrower audience of undergraduate and graduate students in molecular biology — the main competitor being the second edition of R. W. Old and S. B. Primrose's *Principles of Gene Manipulation*. As a third edition of that book has just been published (Blackwell Scientific, £11.80), we can look forward to successive editions of these two books leap-frogging one another in their coverage of the field. Glover's book is in fact a much expanded and updated version of his 1980 book *Genetic Engineering: cloning DNA*.

As its title indicates, the book concentrates on the laboratory techniques involved in cloning and characterising genes. Glover takes great care at all points, however, to describe the fundamental biology of the systems with which he deals before plunging into the technology. The book builds, as does recombinant DNA technology itself, on classical bacterial genetics. Thus, clear descriptions of the biology of plasmids and of bacteriophage lambda precede the accounts of the use



Mojos Indian dancing before the altar on a holy day (1867), from *The Hidden Peoples of the Amazon*, a booklet written by Elizabeth Carmichael, Stephen Hugh-Jones, Brian Moser and Donald Tayler to accompany an exhibition at the Museum of Mankind in London (British Museum Publications, £4.50).

of these DNA molecules as vectors to replicate and express foreign genes. The construction of the principal classes of vectors is described in some detail — particularly valuable, as students frequently regard vectors as simply tools which are available from their supervisor's freezer and give little thought to the ingenuity that went into their original design and construction. There are times, however, when this somewhat historical approach becomes laborious and others when the author is forced to give up the unequal struggle.

The book is very well produced. The black-and-white line diagrams are clarified by an intelligent use of shading and the cartoons of common procedures are both realistic and informative. The quality of the half-tone photographs is not so high (and one is

printed the wrong way round). The sound biological basis of the book extends beyond bacterial genetics, and Glover's enthusiasm for his own experimental subject (the fruit fly *Drosophila melanogaster*) shines through. We are also treated to clear accounts of the genetics of yeast, the plant pathogen *Agrobacterium*, and of mammalian cells and their viruses. The book is as up-to-date as it is reasonable to expect in such a fast-moving field, and I will certainly recommend it to my students.

Stephen Oliver

Stephen Oliver is senior lecturer in applied molecular biology at the University of Manchester Institute of Science and Technology.

Standing Guard

Protecting Foreign Capital in the Nineteenth and Twentieth Centuries
CHARLES LIPSON

Foreign investors are drawn abroad by the lure of profits, but they also face significant risks. *Standing Guard* examines how investors have coped with these risks and protected their capital abroad, from the days of gunboat diplomacy to the present era of corporate negotiations. *Studies in International Political Economy*
£33.25 Cloth 330pp 0-520-03468-6
Paper £11.25 0-520-05327-3

Fortcoming: American Domestic Priorities

An Economic Appraisal
Edited by JOHN M. QUIGLEY & DANIEL L. RUBINFELD
In this volume a group of prominent economists, many of whom have served in Republican or Democratic administrations, raise and answer questions fundamental to the design of domestic policy. As well as examining the effects of funding cuts on various areas they also propose imaginative alternatives to reduce the federal deficit.
£30.95 Cloth 350pp 0-520-05521-7
Paper £9.50 0-520-05521-5

UNIVERSITY OF California PRESS

126 Buckingham Palace Road London SW1W9SD

The Share Economy

Conquering Stagflation
MARTIN L. WEITZMAN

Despite being written in a style designed to make it accessible to any general reader with a smattering of economics, Mr Weitzman's book may well be one of the most important contributions to the problem of dealing with unemployment in capitalist societies since Keynes wrote *The General Theory*. Matthew Symonds, *Daily Telegraph*, £18.95 Hardback 184pp 0-674-80688-3

Growth, Distribution, and Prices

STREBHNA MARLIN

What determines the rate of growth, the distribution of income and the relative prices of goods? This watershed treatise analyses the answers to these questions provided by three major theoretical traditions: neoclassical, neo-Marxist and neo-Keynesian.
Harvard Economic Studies, 156
£19.95 Hardback 564pp 0-674-36418-5

The Intellectual and the Marketplace

(Enlarged Edition)
GEORGE F. STIGLER

George Stigler's professional writings are joined with his legendary wit and *The Intellectual and the Marketplace* simultaneously reveals this gift. The book's reappearance after many years, in a new edition enlarged by one-third, will be warmly greeted by economists and general readers alike.
£16.95 Hardback 192pp 0-674-46788-8
Paperback 0-674-46788-8

HARVARD

UNIVERSITY PRESS 124 Buckingham Palace Road, London SW1W9SD

Economics Textbooks

Economics

A.J. CULVER

This is an exciting and vividly different approach to the teaching of introductory economics based on the premise that students need practical skills as well as a general theoretical background to the subject. Special features include case studies, self-assessment questions (with full answers), signposts for note-takers and the full integration of both micro and macroeconomics.

(August) 680 pages, hardback £29.50 (0 631 13799 8)

paperback £9.95 (0 631 13801 3)

An Economics Primer

CHARLES GRANT

This innovative book meets a widespread need for a short, but comprehensive introduction to the principles of economic analysis. The concise introduction makes an excellent reference tool, giving brief and easily located explanations of the essential concepts students need to master.

(August) 232 pages, hardback £17.50 (0 631 14091 3)

paperback £6.95 (0 631 14092 1)

British Industry: An Introduction

PETER JOHNSON

A comprehensive introduction to the organization and outline of British industry, this book is firmly based on recent empirical studies and the latest data. It discusses many of the topical issues in industrial organization - privatization, small firms - as well as such subjects as contestable markets, transaction costs, the nature of the firm, the entrepreneur.

256 pages, hardback £19.50 (0 631 14205 3)

paperback £6.95 (0 631 14206 1)

Industrial Economics

ROGER CLARKE

This new textbook provides a balanced coverage of this core subject which has seen several important theoretical developments in recent years. Roger Clarke's clear and concise text provides an ideal foundation, being highly readable without sacrificing analytical rigour on empirical content.

352 pages, hardback £18.50 (0 631 14205 8)

paperback £6.95 (0 631 14205 3)

paperback £6.95 (0 631 14205 3)

Mathematics for Economists

MARTIN TIMBRELL

This new textbook provides first-year students with an understanding of all mathematical techniques, and is divided into six almost self-contained sections: basic concepts, dynamic analysis, differentiation, integration, multivariate calculus and matrix algebra.

256 pages, hardback £19.50 (0 631 14086 7)

paperback £7.95 (0 631 14087 5)

Basil Blackwell

BOOKS

ECONOMICS

Guided tour

The Economics of John Hicks selected and with an introduction by Dieter Helm. Blackwell, £7.95 ISBN 0 631 13616 9

The Economics of John Hicks may be regarded as a one-volume selection from the more comprehensive three volumes of *Collected Essays on Economic Theory*, and is primarily aimed at the undergraduate market (though one wonders how many students actually buy this type of book). The papers are arranged under four heads: value, welfare, macroeconomics and money, and methods. The first part contains half of the famous 1934 paper, written with R. G. D. Allen, on "A reconsideration of the theory of value". Like Fisher and Pareto, this replaced the concept of marginal utility with that of the marginal rate of substitution, moving the subjective theory of value towards a logic of choice by avoiding cardinal utility. The rest of the first part is dominated by discussion of various concepts of individual and social income. *Value and Capital* (1939), the major reason for Hicks's Nobel prize, is represented only by the discussion of the permanent income concept, which depends crucially on expectations of future income. His later *Revision of Demand Theory* (1956) is not represented at all.

The first paper in the part devoted to welfare economics is the celebrated "Foundations of welfare, economics" (1939), in which Hicks synthesized the main lines of what became known as the "new welfare economics". Having rejected cardinal utility Hicks attempted to have attempted to minimize the role of private market activity, (Czechoslovakia, Bulgaria, Romania and the USSR). Ashund argues that this indicates that the private sector performs an essential function in a centrally planned economy in reducing imbalances between supply and demand for specific commodities and that to attempt to eliminate the private sector is to show a preference for market disequilibrium and/or to encourage illegal market activity. The private sector is dominated by handicraft production, personal services and retail trade. The objective of private entrepreneurs is to make high money incomes, and in both countries they enjoy living standards similar to those of senior party officials. There are, however, substantial differences between the operation of the private sector in the two countries. In Poland the central planning of materials is far tighter than in the GDR, and the private entrepreneur is frequently required to break the law to obtain inputs to perform otherwise legal activities. Legal violations are subject to arbitrary checks which can result in loss of licence and the loss of livelihood. The essence of Polish private enterprise is speculative, short-run, "get-rich-quick" profit maximization. The East German entrepreneur encounters less difficulty in obtaining supplies from the state sector and laws are more precisely delineated and administered. The typical East German entrepreneur tends to be law-abiding and craft-oriented, with a longer-term perspective. These differences in outlook are reflected in earnings: in Poland it is estimated to be five to eight times higher than the average wage, as opposed to just one double the national wage in the GDR.

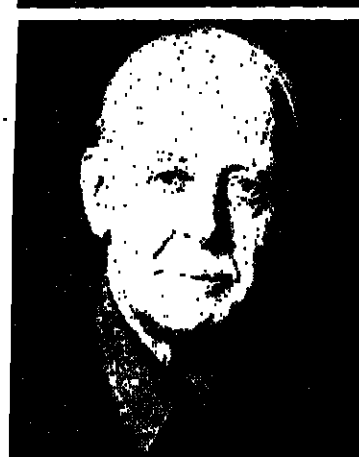
Get rich quick

Private Enterprise in Eastern Europe: the non-agricultural private sector in Poland and the GDR, 1945-83 by Andrzej Ashund. Macmillan, £25.00 ISBN 0 333 37412 6

Illegal private market activity in the Soviet Union and Eastern Europe has received popular and critical attention in recent years. Reports of corruption in the official economy and of state employees moonlighting during working hours using state materials have appeared in the Soviet and East European press, and have been eagerly repeated in the West. In addition, the growth of the population on foodstuffs supplied by the legal private sector has also been described in both eastern and western sources.

The existence of a legal private sector outside agriculture is also acknowledged in the official statistics of Hungary, Poland and the GDR. This sector has received far less critical attention and this detailed study of the non-agricultural private sector in Poland and the GDR, based on extensive interviews conducted in the two countries, helps to redress the balance.

Although the sector is not large (accounting for approximately 5 per cent of non-agricultural employment in 1980, according to questionable statistics) its significance can be gauged from the author's observation that the size of the black economy is smaller in these three countries than in the other East European economies



John Hicks: this portrait and that of Fritz Machlup on page 28 are taken from Mark Blaug's *Great Economists since Keynes*, published by Wheatsheaf at £30.

ted in this paper to resurrect welfare economics by the use of compensation tests, although this turned out to be not entirely successful. Logically the papers on value and welfare should really be grouped together, and it seems unfortunate that some of the wartime work on consumer surplus has not been included.

The "macroeconomics and money" section includes the major papers on "A suggestion for simplifying the theory of money" (1935) and "Mr Keynes and the Classics" (1937). The latter is of course known indirectly by all undergraduates for its introduction of the IS-LM apparatus. There is then a gap of almost 20 years before the next paper, followed by a further gap of 24 years. Inclusion of the later papers gives Hicks the opportunity to provide his own "commentary", but I would have preferred more space for the earlier and more original contributions. A comparison of the style of the early and late writings is however of interest: there is very little change; they are always very confident and become only more discursive and personal with age. The final selection on methods has two papers from the middle 1970s concerned with "time in economics", and the interesting autobiographical piece which emphasizes the influence of Lionel Robbins at the London School of Economics.

The editor provides a 20-page, and rather overambitious, introduction to Hicks's work, and a brief introduction to each section. It is of course too early to assess his life's work, and Helm, far too close to his subject, certainly does not provide a balanced view. For example, he describes Hicks's paper on "Revolutions in economics" as a "classic in the history of economic thought". This is surely one area in

which Hicks's scholarship and judgement have been of quite ordinary standards. Helm's bibliography of Hicks's published writings is significantly marred by the fact that it contains so little bibliographical information about each title and several errors; this makes search difficult and is not a good example to undergraduates.

A rather different sort of tribute to Hicks is the set of essays collected in *Economic Theory and Hicksian Themes*, which first appeared as a special volume of *Oxford Economic Papers*. The volume begins with a brief review by David Collard of Hicks's major contributions to economic theory, using the metaphor, itself often used by Hicks, of the mountain guide. More critical reviewers of Hicks's style have complained of his tendency to lead the reader "up the garden path", and of his sparse references to the maps and other climbing aids left behind by other planners. But however meandering and uneven the pace, there is no doubt that the patient traveller is usually rewarded with interesting "Alpine flowers".

Collard's piece could indeed be a useful introduction to a book on "Hicksian themes", but unfortunately the remainder of the book is highly variable both in the quality of the contributions and the attitude taken by each author. The most solid and serious chapters are perhaps those of M. F. Scott (on maintaining capital intact), and J. F. Wright (on cost of living consciousness in collective bargaining), followed by Helm (methodology of Hicks and Friedman), Stefano Zamagni (a mathematical analysis of traverses in a fix wage model), and R. C. O. Matthews (a brief review of literature on selection processes in economics). Robert Solow repeats a rather light lecture on IS-LM. A. K. Sen introduces his own book on the standard of living. A. Leijonhufvud is laudacious and inconclusive about time and money, and F. H. Hahn is typically acerbic and dogmatic about wage flexibility.

This sort of collection may make a suitable special issue for a journal, but the addition of an index does not necessarily turn it into a good book. One wonders what the editors actually did; there is not even consistency in the style used (and details given) for bibliographical references. There are some definite links between chapters, but no cross-references are given. Even the publishers are not sure who edited the volume, since the list of people given on the title page is different from that on the cover.

John Creedy

John Creedy is professor of economics at the University of Durham.

Cornell Studies in Political Economy

CORPORATISM AND CHANGE

Austria, Switzerland, and the Politics of Industry

By PETER J. KATZENSTEIN. The author asserts that Austria and Switzerland's political stability and economic flexibility are not in contradiction but complement one another: by tightly linking industrial policy with corporatist politics, both countries tend to narrow political inequalities. \$38.50

Forthcoming...

SMALL STATES IN WORLD MARKETS

Industrial Policy in Europe

By PETER J. KATZENSTEIN. Examines the relationship between state institutions and civil society in advanced industrial democracies in Europe. \$12.05 paper, \$32.95 cloth

GOVERNMENTS, MARKETS, AND GROWTH

Financial Systems and the Politics of Industrial Change

By JOHN ZYSMAN. This first-rate book covers a lot of ground. At the core is a pioneering analysis of the way national financial systems facilitate or hinder the conduct of industrial policy. \$16.45 paper

AMERICAN INDUSTRY IN INTERNATIONAL COMPETITION

Government Policies and Corporate Strategies

Edited by JOHN ZYSMAN and LAURA TYSON. The bulk of this valuable book is made up of fairly detailed studies of American industries that are having trouble coping with foreign competition. Foreign Affairs. \$21.95 paper

INTERNATIONAL REGIMES

Edited by STEPHEN KRASNER. Fourteen distinguished specialists in international political economy explore the concept of international regimes—the implicit and explicit principles, norms, rules, and procedures that guide international behavior. \$10.95 paper, \$32.95 cloth

CLOSING THE GOLD WINDOW

Domestic Politics and the End of Bretton Woods

By JOANNE GOWA. This book examines the ways in which American domestic influences contributed to the end of the Bretton Woods regime. \$13.75 paper, \$30.25 cloth

CORNELL UNIVERSITY PRESS

250 Trevor Brown Associates, Suite 78, 250 Channing Cross Road, London

BOOKS

ECONOMICS

Rates of growth

The Strategy and Performance of British Industry 1970-1980

By George A. Luffman and Richard Reed. Macmillan, £25.00 ISBN 0 333 37937 3

Dr Luffman and Reed have set out to write an ambitious book. Presenting the argument associated with Alfred D. Chandler and his students at the Harvard Business School that the most important decisions the senior management of a company must make concern the range and nature of the goods and services the company will market in the future, the authors attempt to measure the extent, character and consequences of the diversification strategies pursued by British industry as a whole in the tumultuous, difficult decade of the 1970s.

For this task the authors have taken a sample of 496 companies drawn from the *Times Top 1000 Companies* (1970) that were still in independent existence in 1980. Once the 496 sample companies were identified, they were listed in Appendix B together with a brief description - generally two or three lines - of the company's principal lines of business in both 1970 and 1980 and the allocation of the lines of business of each firm for each of the two years to one of eight categories according to degree of diversification.

The related tasks of description and classification were crucial to the analysis that forms the core of the book and constituted a major effort requiring due study of *Extel's Analysts' Cards and Handbook of Market Leaders* supplemented in a small minority of cases by resort to the annual reports of companies whose operations could not otherwise be identified. The descriptions appear generally accurate and although the classifications are subject to an element of arbitrary distinction (for example, ICL, which provides computer systems programs and services as well as computer hardware could be as reasonably classified as vertical single as single) the classifications are at least plausible and the basis for the choices is explicitly set out. The authors also commendably subject their classification scheme to a sensitivity test by calculating the extent of diversification by an alternative procedure utilizing the Herfindahl index. This indicated unfortunately that the extent of diversification recorded is highly sensitive to the measure used.

With their data organized in this manner, Luffman and Reed then seek to relate both diversity (the degree to which a firm's turnover is concentrated in a limited range of activities) and diversification (the change over the decade in the degree of diversity) to two measures of company performance: first, the change in share price between 1970 and 1980 (adjusted for split and rights issues) plus all dividends paid over the period as a proportion of the 1970 share price; second, share price variance measured as the average over the 11-year period of the annual variance reached by the highest and lowest values reached by a company's shares; third, the percentage increase in sales between 1970 and 1980; and fourth, the percentage increase in profit as a percentage of capital employed between 1970 and 1980. All values were deflated by the

1970 value of the retail price index. Luffman and Reed conclude that diversification in Britain during the 1970s continued at a rate comparable to that recorded for both Britain and the US in the previous two decades. They also conclude on the basis of statistical tests that the extent of diversification was largely unaffected by company size (except that very small companies were less diversified and very large companies more diversified than would have been expected on the basis of aggregate proportions) and that the extent of diversification was unaffected by industry classification in the sense that within any industry, the proportion of companies classified as "diversifiers", "stable" and "reducers" was not statistically different to the proportion established for the sample as a whole. By the criterion of their measurements and definitions, companies that (unsuccessfully) diversified achieved manifestly greater returns than those that did not and that these enhanced yields were associated with comparatively large share price variance. They also found that the improvement in the rate of return on capital employed by the largest 25 companies (which also tended to be comparatively highly diversified) in their sample was significantly greater than the improvement achieved by the rest of the sample companies while the total yield on shares in the same 25 giant companies was significantly lower than that achieved by the rest of the sample. Luffman and Reed also found that all size groups of companies becoming more diversified had greater increases in sales than all sizes of companies that maintained a stable pattern of diversification; these companies in turn achieved more rapid rates of sales growth than did companies that reduced the diversity of their operations.

While the issues that motivate Luffman and Reed's research are important, their work and their conclusions are subject to two fundamental objections. The first, and on practical grounds more damning objection, concerns the methodology they employed, both in terms of the sample chosen and the means by which the share price, profit and capital stock data were processed. Although they note several times that to base the sample on the independent companies listed in *The Times Top 1000 Companies* (1980) would cause rapidly growing firms to be over-represented, nowhere do they consider the bias, potentially even greater, in their own procedure. Their sample consists only of companies that survived the 1970s independently. Since many of the survivors took over, often on very attractive terms, smaller and/or less successful companies, the profitability, rate of sales growth, and value of the capital stock of these survivors are all likely to be exaggerated relative to companies that grew through organic expansion. To assess this potentially serious bias - indicated by the fact that their sample exhibits on average a real return on shares over the period of 32.9 per cent while the FT Actuaries All-Share Index suffered during the 1970s a real loss of 45 per cent - their sample should at the very least have been compared with one drawn from the 1980 list of the top 1000 companies augmented by selected international comparisons. Even more seriously, the authors calculate share price movements, sales growth, and the rate of return on capital employed using only data for two years, 1970 and 1980. There is therefore the overwhelming probability that their results reflect much more accurately the peculiarities of those two years than the underlying trends which they seek to examine.

The blindingly obvious way to calculate share price, sales, and profit movements, using data for all years (or quarters) between 1970 and 1980 would have been by linearly regressing the natural logarithms of the indicators

against time. Such a procedure would also have permitted a natural interpretation of risk as the proportional movements of share prices, sales, and profits around their trend rates of growth. As it is, the authors are forced to concede that no significance can be attached to the absolute values of their risk measure, the unacknowledged choice of risk measure renders all their observations on the capital asset pricing model (which they persist in calling the Efficient Markets Hypothesis) either fatuous, vacuous, or simply wrong.

The second objection applies to all aggregative studies of company behaviour. Alfred Chandler's students in general and those who emulate them, Luffman and Reed in particular, have failed to maintain the balance between abstraction and real detail which Chandler achieved by the systematic use of telling examples. Thus Luffman and Reed's aggregative study generates abstractions which are not only very difficult to relate to anything but which also make appalling reading. A single quotation (from page 76) must suffice to illustrate the hard slog to nowhere which awaits the readers of their book:

A much larger percentage (79 per cent) of companies moving from the Single to the Related category moved to the Constrained subgroup, whereas, of the Dominant companies which moved to the Related group, only 56 per cent ended in the Constrained subgroup. A most significant result from this extended analysis was that only 10 per cent of the companies in the Constrained subgroup in 1970 moved to Related Group by 1980.

William P. Kennedy

Dr Kennedy is lecturer in economic history at the London School of Economics.

Multinational Excursions

CHARLES P. KINDLEBERGER

This collection of papers, lectures, articles and reviews focuses on the role of multinational corporations in the international economy.

£5.25 Hardback 288pp 0-282-11082-X

Sources of International Comparative Advantage

Theory and Evidence

EDWARD E. LEAMER

This is the first book to present a clear picture of the international exchange of goods and of the resources that account for the exchanges that occur.

£50.50 Hardback 400pp 0-282-12107-7

The Forces of Economic Growth and Decline

PAOLO SYLOS-LABINI

This collection of essays examines various aspects of the forces that drive the general process of economic growth and decline.

£30.75 Hardback 272pp 0-282-19224-1

Trade Liberalization among Major World Trading Areas

JOHN WHALLEY

This book provides a much-needed quantitative response to the question of who gains and who loses in trade liberalization.

£33.50 Hardback 388pp 0-282-23120-4

Deregulating the Airlines

ELIZABETH E. BAILEY, DAVID R. GRAHAM & DANIEL P. KAPLAN

Examining the reasoning behind America's Airline Deregulation Act of 1978, this book is a unique case study for those interested in deregulation.

£22.25 Hardback 284pp 0-282-02213-3

Exchange Rate Management Under Uncertainty

EDITED BY JAGDEEP S. BHANDARI

A collection of original current work on economic management under flexible exchange rates in the presence of uncertainty.

£33.50 Hardback 388pp 0-282-02210-9

Monetary Policy in Our Times

EDITED BY ALBERT ANDO, KIDEKAZU EGUCHI, ROGER FARMER & JOSHIO SUZUKI

A collection of eight original essays that cover monetary policy in an uncertain world and policies to overcome stagflation.

£27.95 Hardback 388pp 0-282-01082-8

THE MIT PRESS

180 Buckingham Palace Road London SW1W 8SD

CAMBRIDGE

New Economics titles

The Economics of Industrial Society

MICHIO MORISHIMA

This book provides an effective critique of current economic theories, and develops an original model of the economics (whether neoclassical, Marxist or Keynesian) of modern industrial society.

... a wealth of ideas' *The Times Higher Education Supplement*

Hard covers £27.50 net

Paperback £9.95 net

An Economic Theorist's Book of Tales

Essays that Entertain the Consequences of New Assumptions in Economic Theory

GEORGE A. AKERLOFF

A collection of essays exploring the consequences of making non-standard economic assumptions. The essays cover a wide range of microeconomic and macroeconomic fields - from insurance markets and trade in underdeveloped countries to unemployment and discrimination.

Hard covers £17.50 net

Paperback £6.95 net

Money and Markets

Essays by Robert W. Clower.

Edited by DONALD WALKER

Donald Walker brings together Robert Clower's influential essays on monetary economics, grouped so as to bring out clearly the development of his thought. The essays constitute a well-rounded treatment of the major problems in monetary economics.

£22.50 net

Fixed Point Theorems with Applications to Economics and Game Theory

KIM C. BORDER

This book introduces fixed point theory, giving the reader access to the mathematical techniques involved, and demonstrates various applications.

£17.50 net

International Economic Policy Coordination

Edited by WILLEM BUTTER and RICHARD C. MARSTON

Based on a conference organised jointly by the Centre for Economic Policy Research and the National Bureau of Economic Research, this volume examines recent developments in the study of international economic policy coordination, presenting some of the best current research and a concluding panel discussion.

£27.50 net

The Philosophy of Economics

An Anthology

Edited by DANIEL HAUSMAN

This anthology of essays on methodological problems in economics contains the classic discussions together with a sampling of work recently undertaken. There is a comprehensive introduction by the editor and an extended bibliography.

Hard covers £25.00 net

Paperback £8.50 net

Inflation, Stagflation, Relative Prices and Imperfect Information

ALEX GUKJERMAN

A summary view of the recent imperfect information approach to inflation and its real effects, focusing on informational limitations occurring when individuals have asymmetric information about the general price level and when individuals cannot distinguish permanent from transitory changes in the economic environment.

£19.50 net

Instrumental Variables

R. J. BOWDEN and D. A. TURKINGTON

Recent advances in establishing the nature and scope of estimators in econometrics have shed more light on the importance of instrumental variables. This book argues that such methods may be regarded as a strong organising principle for a wide variety of estimation and hypothesis testing problems.

£20.00 net

Econometric Society Monographs in Quantitative Economics

Cambridge University Press

The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU, England

New Economics Texts

CASE STUDIES IN ECONOMICS

Cedric Sandford & Malcolm Bradbury

University of Bath Department of Economics

An extremely useful book for those beginning to study economics as it presents actual, topical case studies.

Paperback £5.50 net Published January 256pp 0 582 29616 6

THE POLITICAL ECONOMY OF MARX

Second Edition

M E Howard & J E King

University of Waterloo, Canada University of Lancaster

Comprehensive exposition and appraisal of Marx's political economy: no prior knowledge of his work is assumed.

Paperback £9.95 net Published February 320pp 0 582 29627 7 (Modern Economics Series)

INTRODUCTORY ECONOMETRICS

Theory and Applications

R L Thomas

University of Salford

A welcome text which balances theoretical and applied material, for students with a knowledge of economics who need an introduction to econometrics.

Paperback £11.50 net Published February 416pp 0 582 29634 X (Longman Economics Series)

ECONOMIC DEVELOPMENT IN THE THIRD WORLD

Third Edition

Michael P Todaro

New York University

The author emphasises the difficulties faced by Third World policy makers when applying theory to actual problems.

Paperback £11.95 net Dux May 580pp 0 582 29874 9

AN INTRODUCTION TO MONETARY ECONOMICS

P G A Howells & K Bain

North East London Polytechnic

A clear explanation of the relevance of economic theory to the policy and attitudes of government, which despite its introductory nature does not shun controversy.

Paperback £4.95 net Published April 192pp 0 582 29863 3

APPLIED ECONOMICS

An Introductory Course

Alan Griffiths & Stuart Wall

Cambridge College of Arts & Technology

Already an enormous success, this major new textbook combines readability with clarity and comprehensiveness, and has been written with the needs of a wide range of students in mind, from A-level and B/TEC to HND and undergraduate.

Paperback £8.95 net Published 1984 512pp 0 582 29837 4

For more information on these and other Economics texts, please contact the address below.

INSPECTION COPIES of these books are available to teaching staff within the UK who wish to consider using them as course texts. Please write with details to:

Catherine Burrell, University
of Further Education Division,
Longman House, Burnt Mill,
Harlow, Essex CM20 2JE

Longman

Economics Journals from Basil Blackwell

Bulletin of Economic Research

Edited by John D. Hey

and Peter J. Lambert

January, May and September

£13.50 (UK) £16.90 (overseas)

The Economic Review

City University Business School

Edited by Michael Sparrow, Brian

Griffiths, William R. and Peter W. Dobson

April and September

£45.00 (UK) £55.00 (overseas)

Financial Accountability

and Management

Edited by John Perrin

April and October

£6.50 (UK) £8.15 (overseas)

Fiscal Studies

Edited by Michael Keen

Published for The Institute for Fiscal Studies

February, May, August and November

£21.00 (UK) £26.25 (overseas)

*Institutional prices on application.

Please send orders and sample copy

requests to:

Journals Department, Basil Blackwell,

108 Cowley Road, Oxford OX4 1JF

Journal of Business Finance

and Accounting

Edited by Richard Bristow

and John Perrin

January, April, July and October

£21.25 (UK) £26.75 (overseas)

Journal of Industrial

Economics

Edited by Donald Hay

and Lawrence J. White (US)

September, December, March and June

£16.25 (UK) £20.35 (overseas)

Oxford Bulletin of

Economics and Statistics

Edited by David Hendry,

John Knight, Ken Mayhew,

Stephen Nickel

February, May, August and November

£17.50 (UK) £22.50 (overseas)

The World Economy

Edited by Peter Oppenheimer

and Ingo Walter

Published for The Trade Policy Research

Centre, London

March, June, September and December

£16.50 (UK) £24.40 (overseas)

BOOKS

ECONOMICS

Human capital

Labour Economics

by D. Carlisle, C. A. Pissarides, W. S.

Siebert, P. J. Sloane

Longman, £8.95

ISBN 0 582 29564 5

Labour Economics appears in a series for intermediate and advanced under-

Moving targets

The Development and Operation of

Monetary Policy 1960-1983:

a selection of material from the

Quarterly Bulletin of the Bank of

England

Clarendon Press: Oxford University

Press, £17.50 and £7.95

ISBN 0 19 877234 3 and 877233 5

The material presented in this book represents a collection of articles and speeches by senior Bank of England officials designed to portray the development of monetary strategy since 1960 and the concomitant changes in market (bill and bond) operations required to achieve monetary policy objectives. Introductory and linking passages are provided by senior bank staff who, by virtue of their position at the forefront of policy design and implementation, are ideally placed to put the assorted material in its proper context.

The book starts with a discussion of the metamorphosis that occurred in the late 1960s when central bankers replaced (nominal) interest rate stabilization with control of monetary aggregate growth as their major operational objective. Initially used as monitoring devices, monetary aggregates were soon upgraded to the status of targets, at first unpublished but, by 1976, in a publicly-announced form for the UK. The rationale for the use of such targets is closely analysed as are the numerous operational problems that were experienced in running a targeting regime.

Given the decision to use monetary aggregates as the "intermediate" targets of monetary policy the authorities next had to decide on an optimal strategy for attaining the targets. The reasons for preferring the manipulation of interest rates to the use of "direct" credit controls under Competition and Credit Control (1971) are

graduates. After a very brief introduction, four surveys (each with well over a hundred references) deal with human capital, discrimination, job search, and trade unions and wages. While not intended to be a comprehensive selection of topics it does claim to be representative of some of the most active and significant areas of labour economics.

The surveys differ in their length, their quality, their attention to policy, and their style. For example C. A. Pissarides succeeds in giving a purely verbal account of job search (which is an interesting achievement since most of the literature comprises formal models) whereas W. S. Siebert's exposition of human capital is more mathematical. Despite such diversity the book as a whole will convey that the confident and simple assertions of basic labour textbooks are soon overtaken by complex problems. An evi-

clearly explained as is the need for the introduction of a new instrument - the Supplementary Special Deposit Scheme, colloquially termed the "corset" - to curtail monetary growth back in 1973. The difficulties encountered in using the "corset" were, however, initially underestimated and the abolition of exchange control in 1979 finally rendered it obsolete. This paved the way for a return to the preferred option of using the market mechanism, interest rate control, to effect monetary restraint through the impact on the demand for money and bank credit.

In August 1981 the present system of monetary control was put into operation, although only after rejection, at least for the time being, of "monetary base control" following a thorough debate on the relative merits of alternative control regimes. Direct credit controls are eschewed and open market operations in bills (mainly commercial bills) and government bonds are used to secure control over monetary growth in the medium and short-term respectively. The technicalities of "overfunding" (the net sale of more government securities than is strictly necessary to neutralize the expansionary monetary effects of the central government's borrowing requirement) are lucidly explained within this context.

Although already standard reading on most monetary economics and banking courses, professional and otherwise, the assembly of the material within one volume will undoubtedly facilitate access to what is an extremely important survey of the conduct of monetary policy over the last 25 years or so. It should also stimulate the interest of the informed lay person by providing, in a highly readable and, on the whole, non-technical fashion, an authoritative analysis of the factors guiding policy-makers in an area which undeniably touches us all.

Maximilian Hall

Dr Hall is lecturer in economics at Loughborough University.

dent message of each survey is that key concepts are often unmeasurable: "there is no precise way of measuring units of human capital"; "discrimination is inferred rather than observed directly"; "neither wage offers nor reservation wages are observable"; and the non-union wage is unobservable and so has to be estimated by a "number of variables which will, it is hypothesized, determine it". As a consequence there is an abundance of sometimes conflicting findings in empirical work and theories become more "a way of looking" or an "organizing tool" rather than exact descriptions.

Siebert's chapter on human capital presents the basic model and some elaborations, taking a lifetime view embracing both investment in schooling and subsequent on-the-job training. He amply reports empirical results (mainly from America) and gives due consideration to the problems of testing. An occasional ambiguity on average and incremental rates of return does little to mar the clarity and informativeness of his exposition. P. J. Sloane's chapter is an admirable re-view of discrimination in the labour market (pre-market discrimination has had to be excluded) showing the importance of segregation and the fallacy of supposing there to be one all-purpose model of discrimination. There is a lively account of empirical work and policy matters.

The extensive literature on job search has in recent years moved on from the days when ridiculously exaggerated claims were made for the power of search theory despite the fact, as several people argued at the time, that many models rested on manifestly absurd assumptions about people voluntarily becoming unemployed in order to specialize in the search for a better job. There are however, some insights which search models provide and Pissarides gives a sober and credible assessment of such models. The final chapter by Derek Carlisle deals with the differential wages of union and non-union workers and with unions and inflation. The first question is regarded as important because of the role of wages in allocating labour and the possible wage losses arising if unions produce wage "distortions". In fact, however, there is considerable debate about the role of wages as an allocator and the welfare losses arising from misallocation are probably small anyway. (It is unfortunate that there is a slip in the only diagram in the chapter: it is crucial that the total demand curve should be the sum of the sector demands.) All writers of surveys are in danger of providing just a catalogue of authors and points without explaining the points or assessing their significance. The first part of the final chapter does not always avoid this pitfall by a wide margin but the survey gains in strength as it proceeds.

Barry Thomas

Dr Thomas is senior lecturer in economics at the University of Durham.

Table talk

An Introduction to National Income

Accounting

by David King

Edward Arnold, £4.95

ISBN 0 7131 6424 7

An Introduction to National Income Accounting concerns itself with the main accounts for the UK economy which are published annually by the Central Statistical Office in *National Income and Expenditure* or the "blue book" as it is commonly known. It is assumed that the reader has no knowledge of economics but is about to embark on an introductory course on macroeconomics which will require an understanding of many of the figures which appear in the blue book tables. However, it is not the author's intention to provide a rigorous companion to the blue book along the lines of Rita Maurizi's *National Account Statistics: Sources and Methods*. King limits his analysis to the summary tables of the blue book which account for less than 25 per cent of the total content of the 1983 issue.

The first part of the book examines in a conventional manner the basic of national income accounting. Attention is focused on how to estimate a

country's gross domestic product (GDP) in three different ways using an imaginary four-producer economy. In the second part where the estimates presented in the main blue book tables are explained problems of incomplete data are dealt with briefly. The propensity for detail contained in the diagrammatic presentation of the interrelationships between the various sectors of the economy is extremely off-putting, but fortunately it is not required reading for an understanding of the chapters which follow. First-year students of economics are likely to find the chapters in part two deal with flows into and out of the government and foreign sectors useful. Using the blue book accounts for 1983, King explores the relationship between the borrowing requirements of the three relevant parts of the public sector and the overall public sector borrowing requirement. In his account of the UK balance of payments for 1982, King outlines the method of presentation contained in the blue book and relates it to the standard format used in the annual *United Kingdom Balance of Payments* publication, commonly known as the pink book.

Part three is devoted to applications of the accounts. The first application concerns the estimation of changes in a country's real output over time. King examines in some detail the standard statistical techniques which can be used to adjust GDP figures to reflect changes in quantities alone and out-

lines the method used in the blue book. The measurement of a country's economic welfare is considered to illustrate another possible application of certain blue book estimates. King critically evaluates the use of net national disposable income per head as an index of economic welfare in one of the few chapters which refers to published research work. The final chapter on applications moves beyond the blue book to deal with the problems which arise when the output and economic welfare of different countries are compared. King's main concern is to illustrate the superiority of the purchasing power parity approach over the exchange rate method.

Given the author's claim to be writing for the "general student of economics" it is regrettable that one of the most useful applications of national income accounting is omitted: the concepts of "national" expenditure, national income and national product can be used to throw light on the equilibrium condition for the macroeconomy which is a crucial starting point for the study of macroeconomics. In summary, the student who seeks a different and more stimulating treatment of national income accounting than is already available is likely to be disappointed in this book.

J. F. Bradley

J. F. Bradley is senior lecturer in economics at Queen's University, Belfast.

BOOKS

ECONOMICS

A model exposition

Knowledge, Its Creation, Distribution and Economic Significance

Volume Three: The Economics of Information and Human Capital

by Fritz Machlup

Princeton University Press, £46.30

ISBN 0 691 04233 0

The late Fritz Machlup published a classic book on *The Production and Distribution of Knowledge in the United States* in 1962. In 1978, when he was 76 years old, he calmly announced his intention to prepare a new edition of this book in no fewer than nine volumes. This is the third volume in the series, the first two having been published in 1980 and 1981. He died in 1983 while at work on the fourth volume. Much of the data he gathered to update his 1962 estimates, which were to have appeared in volumes five to nine, will now be published in a forthcoming reprint edition of the 1962 book on the production and distribution of knowledge.

The volume under review is entirely self-contained, consisting in fact of two separate monographs on the economics of knowledge and information (complete with a sample bibliography classified under 17 headings) and the economics of human capital formation. The mode of exposition is a peculiar cross between that of a textbook and a survey article but the level of exposition is unashamedly popular: Machlup tells us again and again that he is writing to non-economists or non-specialized economists in a deliberate attempt to demystify the economics of knowledge and information. Throughout the book, therefore, he studiously avoids the use of equations, formulas and even diagrams, arguing that what cannot be said in words is probably not worth saying.

Those who are acquainted with Machlup's previous writings on international trade and industrial organization, and particularly his famous *Essays on Economic Semantics* (1963), will recognize in this book all the hallmarks of his inimitable manner: an emphasis on the precise meaning of the terms employed by economists; a careful review of the basic concepts underlying any piece of analysis; a constant awareness of the problem of specifying empirical counterparts of purely theoretical variables; an equally constant insistence that theories must be tested against empirical evidence but that testing is almost always inconclusive; and, finally, an uncompromising defence of neoclassical equilibrium economics so far as it goes, that is, as a device for predicting the sign of the effects of a change in an exogenous variable on the endogenous variables included in the model. His writing style is wonderfully lucid and may serve as a



Fritz Machlup

model of how economists ought to write - but rarely do. In his foreword to the book, Theodore Schultz likens Machlup's command of the art of writing to other prose artists in economics, Alfred Marshall, Joseph Schumpeter, Jacob Viner and Harry Johnson. Even this well deserved comparison fails to do full justice to Machlup's remarkable talents in explaining economics to the uninitiated.

The book is full of beautiful set-pieces that will interest even specialists in the economic analysis of information: the meaning of the principle of profit maximization as a guide to action when there is uncertainty; the problem of moral hazard and adverse selection in product rather than insurance markets; the economics of racial and sexual discrimination in labour markets; the concept of efficient finan-

cial markets; the concept of public goods and particularly knowledge as a public good; the significance of the concept of equilibrium in all its various guises, including the notion of an equilibrium of rational expectations - he protests against the term "rational" expectations since what is actually meant is "correct" expectations; the famous question of how much of the return of human capital are nature rather than nurture; and the meaning of the so-called "screening hypothesis".

The first eight chapters of this book, some 280 pages in all, would make an excellent textbook in an undergraduate course on the economics of uncertainty and information. Likewise, the last nine chapters of the book, adding up to just over 200 pages, could be usefully assigned as ancillary reading in an undergraduate course on the economics of education; the chapters were completed in 1982 but have hardly dated since they were written. Here I must say, however, that Machlup's reluctance to use geometrical diagrams sometimes stands in the way of the clear exposition of ideas; thus, I defy anyone to grasp the meaning of Mincer's concept of "overtaking" in post-school investment without the aid of a diagram of age-earnings profiles.

Mark Blaug

Mark Blaug is professor emeritus at the University of London Institute of Education, and consultant professor at the University of Buckingham.

Probing attacks

Equilibrium and Macroeconomics

by Frank Hahn

Blackwell, £22.50

ISBN 0 631 13484 2

Many economists depict the world in big bold brushstrokes. For some it is a rickety building, in need of the props and buttresses of state intervention. For others, it is a scene of great natural beauty, but a fragile landscape, menaced by the ugly artificialities of government control, taxes and unions. A third group portray the noble labourer cheated of his deserts by rentier and monopolist. Despite the vast differences in what they see and how they paint it, one thing unites these economists. All of them want to convince others that their particular view is right, and to urge whatever policies follow from it. The lurid, simple shapes and colours in their outlook are meant to assist comprehension and proselytizing. Frank Hahn wages outright war on all those groups. There are two things above all about them which irritate him. First, he hates the dated clichés of their theorizing. Their simple asseverations of blobs and splashes he sees as travesties of the subtle complex fabric of premises and proofs that characterize a proper economic model. The second object of his ire is the ease with which they jump from theorizing to policy imperatives. He knows too

much about the intricacies of theories, about when they do apply and when they don't, to stomach glib policy recommendations unsupported by detailed reasoning or empirical evidence. *Equilibrium and Macroeconomics* brings together 17 of Hahn's more macro-orientated, less technical papers. They span thirty years, from 1952 to 1982. A wide variety of topics is covered, including expectations, growth, monetary theory and international economics. Later pieces include his recent mordant attacks on monetarism, and a powerful critique of neo-Ricardian theories. It contains Hahn's most polemic and frequently "friendly" research papers which were previously available only in a gamut of different journals, not all readily accessible.

The book shows Hahn as an outstanding critic of the views of others. He is biting, puckish, suggestive and cajoling by turns. The right in the form of Milton Friedman and the new classicalists; the left, in the shape of the neo-Ricardians; the soft centre of comfortable textbook Keynesianism - all receive probing attacks at the worst points in the arguments. Yet the message that runs through the book is always the same: don't be fooled by oversimplification; get down to a solid microeconomic foundation; think of the subtle problems which overturn facile answers; and never, never claim more for your results than the premises of your analysis permit.

At several points the reader will be tempted to ask what he should put in place of the models attacked. The volume is replete with "don'ts" and "dos". One answer might be to study Hahn's joint work with Kenneth Arrow, *General Competitive Analysis* (1971). This is a masterpiece, but also a daunting, technical oeuvre which even good graduate students find challenging. Yet even here, the reader will be dispirited to see that the abstractions of general equilibrium theory, for all their stunning precision, have yet to cope satisfactorily with bankruptcy, missing markets, information failures, non-convexities and other inescapable phenomena of the real world. Indeed, no one is keener to emphasize this than Hahn himself.

The wounded macroeconomist, smarting under Hahn's rapier, will try to counterattack with Occam's razor. Why should he abandon his vivid, impressionistic portrayals of the economy? In favour of Hahn's n-dimensional holograms - particularly if they sacrifice intelligibility and still remain ill-equipped to handle the crucial real-world facts? Hahn's lesson is not that should fold up his eyes, but try to paint with much more rigour and realism than he has done in the past. This could indeed be a service to economics, and a boon to the world.

P. J. N. Sinclair

P. J. N. Sinclair is fellow and tutor in economics at Brunel University, Uxbridge.

Economics Titles from Oxford

Social Insurance in Transition

An Economic Analysis

John Creedy and Richard Disney

An advanced textbook on the economics of social security; examines the aims and operation of state social security systems concentrating on the social "insurance" component of systems - pension, unemployment and sickness insurance. £17.50, 0 19 877228 5 £2.95 Paper covers, 0 19 877221 0

Applied Macroeconomics

C. F. Pratten

A textbook using a novel approach to the teaching of macroeconomics while also giving a comprehensive, effective and up-to-date numerical picture of the UK economy. £17.50, 0 19 877222 X £2.95 Paper covers, 0 19 877221 1

Cost, Use, and Value

The Evaluation and Performance, Structure and Prices across Time, Space, and Economic Systems

Francis Seton

Provides a new conceptual framework for analyzing prices and values. The proposed integrated system of valuations for both commodity and factor flows is more comprehensive than existing analyses. £17.50, 0 19 828471 3

Progress in Natural Resource Economics

Edited by Anthony Scott

Associate Editors: John Hellwig, Tracy Lewis and P. A. Neher

A comprehensive survey of recent progress made in natural resource economics. Contributions from more than a dozen distinguished authors cover topics which include resource taxation and property rights; macro-economics and energy policy; and monopoly and uncertainty. £15.00, 0 19 828480 6

Global Energy

Assessing the Future

Jae Edmonds and John M. Reilly</

Universities continued

University of Ulster Magee College Faculty of Business and Management

Applications are invited from graduates with Industrial, teaching or research experience for the following posts: **Senior Lecturer in Business Administration**, from 1 October 1985. Successful candidates will be required to contribute to the teaching of the relevant Department, assist with course development and conduct appropriate research. Whilst based at Magee College, there may be a requirement to undertake duties at any of the four campuses of the University.

Department of Accounting and Finance LECTURESHIP IN FINANCIAL ACCOUNTING AND AUDITING Ref: C85/90 LECTURESHIP IN FINANCIAL ACCOUNTING AND MANAGEMENT Ref: C85/91

Applicants should hold a good honours degree in an appropriate discipline and preferably be members of a recognised professional accountancy body.

Department of Marketing and Business Organisation

LECTURESHIP IN PRODUCTION AND OPERATIONS MANAGEMENT Ref: C85/92

Applicants should hold a good honours degree, and preferably a higher degree, in an appropriate mathematical or science discipline and should have had relevant industrial experience.

LECTURESHIP IN MARKETING Ref: C85/93

Applicants should hold a good honours degree in an appropriate discipline and should preferably have had teaching or industrial experience.

Department of Hotel Catering Management

LECTURESHIP IN HOTEL AND CATERING MANAGEMENT Ref: C85/94

The candidate appointed will be required to teach and undertake research in the general area of Food Studies. Applicants should hold a good honours degree in an appropriate discipline and should have had teaching or industrial experience, at management level.

Department of Public Administration and Legal Studies

LECTURESHIP IN PUBLIC POLICY AND ADMINISTRATION Ref: C85/95

Applicants should hold a good honours degree, and preferably a higher degree, in an appropriate discipline and should be able to offer a wide range of topics within the broad area of public policy and administration. Experience gained in public sector organisations or previous teaching and research experience would be an advantage.

Compensating salaries will be determined by age, qualifications and experience within the range £7,520-£14,925 per annum (under review).

Further details are available from the Staffing Office, University of Ulster at Coleraine, Coleraine Road, Coleraine, Co Londonderry BT52 1BA (Telephone Coleraine 4141, Ext 225) to whom applications, including a full curriculum vitae and the names and addresses of three referees, should be sent not later than 7 June 1985.

(70254)

UNIVERSITY OF EAST ANGLIA Norwich

LECTURESHIP IN ELECTRONIC SYSTEMS ENGINEERING

Applications are invited for a Lectureship in Electronic Systems Engineering to be established from October 1985 in the Engineering School of the University of East Anglia. The successful candidate will be expected to contribute to the teaching of electronic systems engineering and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

Further details are available from the Staffing Office, University of East Anglia, Norwich NR4 7T4 (Telephone 0692 58161 and 21280) to whom applications, including a full curriculum vitae and the names and addresses of three referees, should be sent not later than 7 June 1985.

(70254)

University of Bath

LECTURESHIP IN MATHEMATICS

This post is available from 1st September 1985. All applications will be considered but preference will be given to applicants who are pure mathematicians with research interests in algebra, geometry, topology, differential equations and their applications in physics and biological sciences and engineering.

Salary within the range £7,520 - £14,925.

Further particulars and application forms may be obtained from the Staffing Office, University of Bath, Claverton Down, Bath BA2 9AY. Applications should be sent to the Staffing Office, University of Bath, Claverton Down, Bath BA2 9AY. Applications should be sent to the Staffing Office, University of Bath, Claverton Down, Bath BA2 9AY.

University of Southampton

CHAIR OF ORNITHOLOGY

Applications are invited for the Chair of Ornithology, which will be vacant from 1 September 1985. The successful candidate will be expected to contribute to the teaching of ornithology and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

Further details are available from the Staffing Office, University of Southampton, Southampton SO9 4NH (Telephone 0703 593161 and 21280) to whom applications, including a full curriculum vitae and the names and addresses of three referees, should be sent not later than 7 June 1985.

(70254)



DEPARTMENT OF COMPUTER STUDIES Temporary Lectureship In Computing in the Humanities

Applications are invited for the post of Temporary Lectureship in Computing in the Humanities. The successful candidate will be expected to contribute to the teaching of computing in the humanities and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

LECTURESHIP/SENIOR LECTURESHIP IN COMPUTER SCIENCE

Applications are invited for the post of Lectureship or Senior Lectureship in Computer Science. The successful candidate will be expected to contribute to the teaching of computer science and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

LECTURESHIP IN POLITICAL SCIENCE

A vacancy exists in the Department of Political Science for a Lectureship in International Politics. The successful candidate will be expected to contribute to the teaching of international politics and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

TYRRE PROFESSOR OF ELECTRICAL ENGINEERING

Applications are invited for the Tyrre Professorship of Electrical Engineering. The successful candidate will be expected to contribute to the teaching of electrical engineering and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of New South Wales Sydney, Australia

LECTURESHIP IN POLITICAL SCIENCE

A vacancy exists in the Department of Political Science for a Lectureship in International Politics. The successful candidate will be expected to contribute to the teaching of international politics and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Reading

THREE NEW POSTS

Applications are invited for three new posts in the Department of Applied Statistics. The successful candidates will be expected to contribute to the teaching of applied statistics and to undertake research in this field. The posts are full-time positions with salaries in the range £7,520-£14,925 per annum (under review).

University of Birmingham

DOCTOR-PATIENT INFORMATION EXCHANGE

Applications are invited for the post of Doctor-Patient Information Exchange. The successful candidate will be expected to contribute to the teaching of doctor-patient information exchange and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Reading

LECTURER I/II

Applications are invited for the post of Lecturer I/II. The successful candidate will be expected to contribute to the teaching of the relevant subject and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

TEMPORARY LECTURESHIP IN ENGLISH LANGUAGE AND LITERATURE

Applications are invited for the post of Temporary Lectureship in English Language and Literature. The successful candidate will be expected to contribute to the teaching of English language and literature and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).



Victoria University of Wellington New Zealand

Applications are invited for the post of Lectureship in Pure Mathematics. The successful candidate will be expected to contribute to the teaching of pure mathematics and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Melbourne

FIRST ASSISTANT (IN GERIATRIC MEDICINE) (CONTINUING)

Applications are invited for the post of First Assistant in Geriatric Medicine. The successful candidate will be expected to contribute to the teaching of geriatric medicine and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Reading

THREE NEW POSTS

Applications are invited for three new posts in the Department of Applied Statistics. The successful candidates will be expected to contribute to the teaching of applied statistics and to undertake research in this field. The posts are full-time positions with salaries in the range £7,520-£14,925 per annum (under review).

University of Birmingham

DOCTOR-PATIENT INFORMATION EXCHANGE

Applications are invited for the post of Doctor-Patient Information Exchange. The successful candidate will be expected to contribute to the teaching of doctor-patient information exchange and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Reading

LECTURER I/II

Applications are invited for the post of Lecturer I/II. The successful candidate will be expected to contribute to the teaching of the relevant subject and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

TEMPORARY LECTURESHIP IN ENGLISH LANGUAGE AND LITERATURE

Applications are invited for the post of Temporary Lectureship in English Language and Literature. The successful candidate will be expected to contribute to the teaching of English language and literature and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH



University of Melbourne First Assistant (In Geriatric Medicine) (Continuing)

Applications are invited for the post of First Assistant in Geriatric Medicine. The successful candidate will be expected to contribute to the teaching of geriatric medicine and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Reading

THREE NEW POSTS

Applications are invited for three new posts in the Department of Applied Statistics. The successful candidates will be expected to contribute to the teaching of applied statistics and to undertake research in this field. The posts are full-time positions with salaries in the range £7,520-£14,925 per annum (under review).

University of Birmingham

DOCTOR-PATIENT INFORMATION EXCHANGE

Applications are invited for the post of Doctor-Patient Information Exchange. The successful candidate will be expected to contribute to the teaching of doctor-patient information exchange and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Reading

LECTURER I/II

Applications are invited for the post of Lecturer I/II. The successful candidate will be expected to contribute to the teaching of the relevant subject and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

TEMPORARY LECTURESHIP IN ENGLISH LANGUAGE AND LITERATURE

Applications are invited for the post of Temporary Lectureship in English Language and Literature. The successful candidate will be expected to contribute to the teaching of English language and literature and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

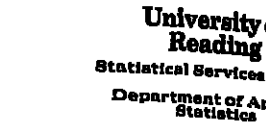
University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH



University of Reading Statistical Services Centre Department of Applied Statistics

Applications are invited for three new posts in the Statistical Services Centre. The successful candidates will be expected to contribute to the teaching of applied statistics and to undertake research in this field. The posts are full-time positions with salaries in the range £7,520-£14,925 per annum (under review).

University of Birmingham

DOCTOR-PATIENT INFORMATION EXCHANGE

Applications are invited for the post of Doctor-Patient Information Exchange. The successful candidate will be expected to contribute to the teaching of doctor-patient information exchange and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Reading

LECTURER I/II

Applications are invited for the post of Lecturer I/II. The successful candidate will be expected to contribute to the teaching of the relevant subject and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

TEMPORARY LECTURESHIP IN ENGLISH LANGUAGE AND LITERATURE

Applications are invited for the post of Temporary Lectureship in English Language and Literature. The successful candidate will be expected to contribute to the teaching of English language and literature and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

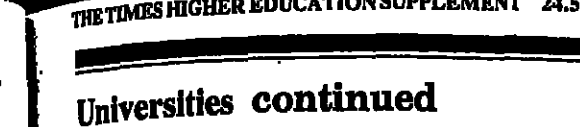
University of Birmingham

LECTURER IN SCHOOL OF FRENCH

Applications are invited for the post of Lecturer in the School of French. The successful candidate will be expected to contribute to the teaching of French and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Birmingham

LECTURER IN SCHOOL OF FRENCH



The Times Higher Education Supplement Universities continued

Applications are invited for the post of Lectureship in Pure Mathematics. The successful candidate will be expected to contribute to the teaching of pure mathematics and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Melbourne

FIRST ASSISTANT (IN GERIATRIC MEDICINE) (CONTINUING)

Applications are invited for the post of First Assistant in Geriatric Medicine. The successful candidate will be expected to contribute to the teaching of geriatric medicine and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Reading

THREE NEW POSTS

Applications are invited for three new posts in the Department of Applied Statistics. The successful candidates will be expected to contribute to the teaching of applied statistics and to undertake research in this field. The posts are full-time positions with salaries in the range £7,520-£14,925 per annum (under review).

University of Birmingham

DOCTOR-PATIENT INFORMATION EXCHANGE

Applications are invited for the post of Doctor-Patient Information Exchange. The successful candidate will be expected to contribute to the teaching of doctor-patient information exchange and to undertake research in this field. The post is a full-time position with a salary in the range £7,520-£14,925 per annum (under review).

University of Reading

Colleges of Higher Education continued

CENTRAL SCHOOL OF SPEECH AND DRAMA

Half-time (.5) Lecturer II in Voice Studies

required for September 1985 or as soon thereafter as possible.

Applications are invited for the above post to teach Voice Studies (including the development of students' own voice and speeches, theoretical foundations and phonetics) within the B.Ed (Hons) Course and other courses.

Applicants should have relevant academic qualifications and teaching experience.

Further details from: Principal's Secretary, Central School of Speech and Drama, Embassy Theatre, Eton Avenue, NW3 3HY.

Completed forms to be returned by 11 June 1985. (70109)

THE DORSET INSTITUTE IS ONE OF THE LEADING INSTITUTES OF HIGHER EDUCATION IN THE COUNTRY

DORSET INSTITUTE OF HIGHER EDUCATION

Department of Business Studies
SENIOR LECTURER IN MARKETING
Required to teach on undergraduate, postgraduate and professional courses.
A qualification in Marketing and industrial or commercial experience is required.
Salary: £11,175 - £14,061 (currently under review).
Further details and application form from: Mrs. E. Dommett, Room F2, Dorset Institute of Higher Education, Wallisdown, Poole, Dorset, BH12 9BB. Tel: (0202) 524111 ext. 309. Please quote ref: THE816.
Closing date: 10 June 1985. (70109)

DERBYSHIRE COLLEGE OF HIGHER EDUCATION

LECTURER II/SENIOR LECTURER

FASHION DESIGN

Salary: Lecturer II £7,548 - £12,098
Senior Lecturer £11,175 - £13,128 - £14,061

Application forms and further particulars from Staffing Officer, Derbyshire College of Higher Education, Kedleston Road, Derby DE3 1GB, telephone Derby 47181, extension 8.

West London Institute of Higher Education

TEMPORARY LECTURER II IN SOCIAL WORK

Applications are invited for temporary lecturers in Social Work for a period of up to one year. The successful candidate will be required to teach on a part-time basis. The salary will be in accordance with the Social Work pay scale. Applications should be sent to the Director of Studies, West London Institute of Higher Education, Uxbridge Road, Uxbridge, Middlesex UB8 3PH. Tel: 0181 607 1111. (70109)

Applicants must hold a professional qualification in Social Work and have at least three years' experience in the field. The successful candidate will be required to teach on a part-time basis. The salary will be in accordance with the Social Work pay scale. Applications should be sent to the Director of Studies, West London Institute of Higher Education, Uxbridge Road, Uxbridge, Middlesex UB8 3PH. Tel: 0181 607 1111. (70109)

Salary: £7,548 - £12,098 plus £278 O.T.A.

Relating applicants may contact David Whitehouse, Head of Department of Social Studies, or Geoff Sage, Course Tutor, for information. Discussion on 0181 607 1111.

Closing date: 14th June 1985.
For application form and further details, please write to: The Vice Principal, West London Institute of Higher Education, Uxbridge Road, Uxbridge, Middlesex UB8 3PH. Tel: 0181 607 1111. (70109)



Roehampton Institute

RESEARCH FELLOW

DEPARTMENT OF DANCE & SPORTS STUDIES
Applications are invited for the post of Research Fellow on a project funded by the Health Promotion Research Trust on the limitation of participation in sport and exercise due to perceived levels of exertion. The project will be examining the problem from physiological and psychological viewpoints. The successful candidate should possess a PhD (or shortly expect to receive one) in either Psychology or Human Physiology. The appointment will be for 18 months, from 1 September 1985, in the first instance with possible extension for a further two years. The starting salary will be in the range £9,048-£10,386 (including London Allowance). Further details, including full instructions about making formal application, can be obtained by writing to: R A Fennell, Assistant Secretary, Roehampton Institute of Higher Education, Digby Stuart College, Roehampton Lane, LONDON SW15 5PH. Closing date for applications: Monday 10 June 1985. (70263)

HEC INTERAGENCY DRUGS EDUCATION PROJECT

1800 - Institute for the Study of Drug Dependence - requires a

Research and Development Officer

to work on development and evaluation of a pack of materials, in particular a curriculum guide for the use of the materials. The pack will be for teachers of social sciences with health education qualifications and experience and interest in training. Starting salary according to age and experience on the University Research I Scale (£7,520 - £12,180 plus £1,250 London Allowance, under review). Applications close 10th June for July appointment.

For further details write to Research and Development Unit (ref 1), ISDC, 1/4 Hutton Place, Hutton Garden, London EC1N 6ND. (70263)

SAINT DAVID'S UNIVERSITY COLLEGE LAMPETER CENTRE FOR THE STUDY OF BRITAIN AND THE WORLD ECONOMY/DEPARTMENT OF GEOGRAPHY E.S.R. RESEARCH STUDENTSHIP BRITISH PROPERTY DEVELOPMENT IN 4 U.S. CITIES

Applications are invited for an E.S.R.C. 'Linked Award' Ph.D. Studentship on the above topic from students with a background in human geography, planning, economics, charted surveying and other relevant disciplines. The award has been made by the E.S.R.C. Environment and Planning Committee. Research will be supervised by Dr. N.J. Thrift and will focus on the growth of British investment in United States office property since 1970 in four U.S. Cities. It is likely that the research will involve overseas field work in the United States.

Further details can be obtained from Dr. N.J. Thrift, Centre for the Study of Britain and the World Economy/Department of Geography, Saint David's University College, Lampeter, Dyfed, SA48 7ED to whom letters of application, including a curriculum vitae, should be sent as soon as possible, and no later than 7th June, 1985. (70263)

UNIST

University of Wales

DEPARTMENT OF TOWN PLANNING

ESRC LINKED STUDENTSHIPS (2)

Applications are invited for students wishing to undertake research on the following topics:

- (a) Semi-detached, bungalow and bungalow flats
- (b) Urban regeneration

This research is linked to the ESRC Research Programme on 'The Changing Urban and Regional System in the UK' and is supervised by the Co-ordinator, Mr Philip Cooke.

(c) New towns and regional development in South Wales

The research is linked to an on-going series of investigations concerned with analysing the performance of indigenous manufacturing firms in peripheral regions. The research is supervised by Professor N. Cooke.

In both cases, applicants should have, or expect, at least an upper second class degree in Geography, Planning, Economics, Sociology or Development Studies, preferably with an industrial or urban planning background. Closing date for applications is June 3.

For further details please write to: Mr Philip Cooke, Dept of Town Planning, UNIST, Cwmwrdd, Cardiff CF1 1BU. (70263)

UNIVERSITY OF EAST ANGLIA Norwich

RESEARCH STUDENTSHIP IN COMPUTING SCIENCE

Applications are invited from persons wishing to carry out research in Computing Science. A studentship is available for a three-year period of study leading to the degree of Ph.D. Applicants should hold (or expect to obtain in Summer 1985) a first class honours degree in Computing. The studentship is supported by the UEA Research Fund and is restricted to the investigation of design techniques for databases involving textual, graphical and other non-formatted data.

Applicants should write to Professor P.M. Stocker, School of Information Systems, University of East Anglia, Norwich, NR4 7TJ, before 14 June 1985.

Full curriculum vitae and details of their research interests.

Applicants should send a curriculum vitae and details of their research interests to: Professor P.M. Stocker, School of Information Systems, University of East Anglia, Norwich, NR4 7TJ, before 14 June 1985.

Completed forms to be returned by 11 June 1985. (70109)

King's College London (KQC) University of London Department of Electronic and Electrical Engineering

RESEARCH STUDENTSHIPS

Applications are invited for ESRC (CASE) and a British Gas research studentship in the following areas:

The Effect of Surface States on GaAs MESFET Performance

Gallium arsenide MESFETs used in microwave integrated circuits are subject to frequency dependent variations of transconductance. This is due to the surface states of the device. This ESRC CASE project builds on the experience of an active research group in this area and is arranged with King's Research Centre.

This project offers experienced device design, microwave measurements. The candidates should have a strong interest in Physical Electronics and experience in a good degree in either Electronics or Physics.

Integrated Circuits based on GaAs IGFETs

An ESRC research studentship is available for research on gallium arsenide integrated circuits. The project is based on novel integrated gate FET devices. This project is part of a continuing relationship with Standard Telecommunication Laboratory.

It will be concerned with the design and fabrication of circuits employing these devices. A strong interest in electronic devices and physical behaviour is necessary. Candidates should also have a good degree in Electronics or Physics.

Microelectronic Techniques Applied to Measurement of Small Gas Flows

Transducers are required for the measurement of small gas flows which are precise and reproducible. Particular applications are in gas metering and in combustion research. Small sensitive devices may be formed by combining thin film and photolithographic techniques.

The transducer with electronic circuitry will be used to measure the flow rate of a gas. The candidate should be interested in electronic devices and the methods used for the fabrication and repair to gain a good degree in Electronics, Physics or a related field.

Applications should be addressed to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Applications should be sent to Dr. J.G. Swannell, Department of Electronic and Electrical Engineering, King's College, London W8 7AH, from whom further information may be obtained. Tel: 01-736 1844.

Agricultural and Food Research Council Food Research Institute Nutrition & Food Quality Division

INORGANIC CHEMIST HIGHER SCIENTIFIC OFFICER

(Re-advertised Post)
3 Year Project

An Inorganic Chemist is required to develop studies on the effects of modern food processing methods on the bioavailability of essential nutrients. This is a three-year project funded by the Ministry of Agriculture, Fisheries and Food. The post will involve the development and application of methods for the determination of bioavailability and will also involve the study of the effects of inorganic nutrients on the bioavailability of essential nutrients. Experience at the post graduate level in inorganic chemistry is desirable, together with an interest in contributing to an inorganic chemistry in biological studies.

Qualifications: A first or upper second class honours degree in Chemistry with at least two years postgraduate experience in inorganic chemistry. Related experience in mass spectrometry and an interest in working on biological problems are desirable.

Salary: On a scale £1,435 - £10,035 (under review). Non-contributory superannuation scheme.

The Agricultural and Food Research Council is an Equal Opportunities Employer.

Further information and application form from: The Secretary, Food Research Institute, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

Completed forms to be returned by 11 June 1985. (70109)

Research and Studentships continued

University of Cambridge

Department of Applied Economics
And the Social and Political Sciences Committee

JUNIOR RESEARCH OFFICER

Northampton Labour Market Study
Employment, Household and Community

Applicants should have a PhD, or equivalent research experience in Economics, Sociology, Social Psychology or a related field. Skills in computing, data handling and interviewing are essential.

The post will be for two years in the first instance from October 1985.

Salary on the scale: £7,050 - £9,950.

Further information from Mrs R. Wilson, Secretary to the Committee of Management, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 13

Administration continued

TRAINING OFFICER (TECHNOLOGY)

We are a leading electro-optics company (employing 2400) and one of the keys to our future success is the excellence of our technological training. To head up this training we require a Training Officer (Technology). The Training Officer will be responsible for the design and implementation of training programmes for: graduates (electronics, mechanical, physics, craft engineering) other employees requiring training in technology. He/She will supervise a small staff of engineers and will be responsible for the Technical Training Centre. Candidates should be graduates (engineering/science) with some training or supervisory experience. The main requirement however is the ability to design and implement creative and effective programmes. We regard this appointment as a key one in our drive towards high standards of technology and performance. The salary will reflect this importance.

Please apply in writing giving brief career details to:

Joyce Watt
Personnel Department
BARR & STROUD LIMITED
Caxton Street
Anniesland
GLASGOW G13 1HZ

Barr & Stroud
Technology of excellence

IMPERIAL CANCER RESEARCH FUND

Scientific Administrator

This post has been created to provide major additional administrative support for the scientific research activities of the ICRF. Duties will include acting as Administrative Secretary to the Academic Board and its Search Committee (which are responsible for advising on scientific appointments), co-ordinating fellowship and bursary programmes, dealing with other Cancer and Medical Research related bodies, and helping with the management of a wide variety of collaborative research programmes.

The post offers opportunities in a broad range of problems on cancer research. An appropriately qualified person it allows the challenge of combining administrative and managerial skills with an interest in cancer research and offers prospects for increasing responsibility in the scientific administration of the Fund's research programmes.

Applicants should have had significant post-doctoral experience in scientific research, preferably in the biological and medical fields, and should ideally have a good background in scientific administration. Salary: range £15,000 - £18,000 with career prospects to £19,000.

For further details and application form write or telephone to: Miss S. M. Hurley, Imperial Cancer Research Fund, Lincoln's Inn Fields, London, WC2A 3PX on 01-242-0200 Ext. 305, quoting ref 73/88.

(70259)

Research

POLICE POWERS AND THE PROSECUTION SYSTEM A Research Initiative

The Economic and Social Research Council proposes to launch a research initiative in the field of police powers and the prosecution system. It has allocated a total of £350,000 to this over a three-year period. The initiative will address the implementation and effects of the Police and Criminal Evidence Act 1984, and the Prosecution of Offences Bill currently before Parliament.

Individual researchers, research institutes and centres in the social sciences and related disciplines are invited to submit outline proposals for research projects in 1,000 words by 13 September 1988.

For further details and a research brief, please write to: Miss Penny Hughes, Sub-Committee on Police Powers and the Prosecution System, ESRC, 1 Temple Avenue, London EC4Y 0BD.

ESRC
ECONOMIC AND SOCIAL RESEARCH COUNCIL

(70110)

Overseas continued

Posts Overseas

Qatar

Senior Teacher of English English Language Centre, Doha

Duties: to teach EFL at all levels, using a range of published courses, to classes of up to twenty young adults. Up to twenty-four contact hours per week, mainly at the English language centre, but there is some teaching off-site for local companies. Assisting with registration, placement testing, setting achievement tests and writing student reports. The senior teacher also assists with course development, level and course co-ordination, materials writing and teacher training. Qualifications: single candidates preferred. First degree preferably in modern languages or English and either RSA Dip. TEFL or PGCE TEFL. A minimum of four years' TEFL experience with at least two years overseas. Salary: QR 6900 per month rising to QR 8000 in the second year (£1=QR 4.5 approximately). Benefits: tax free salary, large furnished accommodation, well equipped, to be shared with one other male teacher. Free water and electricity. Ten working days' leave plus public holidays. Free medical and dental care available locally. Transport allowance of QR 140 pm. Baggage allowance of 100kg on appointment and termination. Contract: two-year contract with the British Council. Closing date for applications: 19 June 1988. Reference: 85 D 43TH.

Syria

Five Teachers of English English Language Institute, Damascus

Duties: teaching English as a foreign language for twenty-one contact hours per week at all levels from false beginners to post FCE level. Assisting with placement testing, registration, materials production. Qualifications: single or married teaching couples preferred. Age range 25-40. Scale 1 posts: Degree plus RSA preparatory certificate with one year's TEFL experience; RSA Dip. TEFL plus two years' TEFL experience. Scale 2 posts: Degree or Cert. Ed. plus RSA Dip. TEFL and two years' experience or PGCE TEFL, and at least one year's TEFL experience. Scale 3 posts: Degree plus RSA Dip. TEFL plus two years' experience or PGCE TEFL, and at least one year's TEFL experience. Salary: Scale 1: £6075 - £6250 - £6500 Scale 2: £6750 - £7000 - £7200 Scale 3: £7500 - £7750 - £8000. Benefits: all salaries tax free. Tourist class airfares at beginning and end of contract. Baggage allowance up to £300 on outward journey and £300 on return journey. Accommodation subsidy. Initial grant of £200. Grant of £150 towards UK medical insurance. £350 per annum towards voluntary contributions to superannuation/national insurance. Contract: two years with the British Council, renewable by mutual consent. Closing date for applications: 12 June 1988. Reference: 85 D 146-15TH.

For further details and an application form, please write, quoting the post reference number to: Overseas Educational Appointments Department, The British Council, 90-91 Tottenham Court Road, London W1P 0DT.

The
British
Council

UNIVERSITY OF SINGAPORE

DEPARTMENT OF BUILDING AND ESTATE MANAGEMENT

Applications are invited for teaching appointments ranging from Lectureships to Associate Professorships from candidates with suitable academic and professional qualifications and practical experience in Building, Quantity Surveying or Urban Estate Management.

Candidates should have a minimum of three years relevant experience after graduation and/or some full-time teaching experience in the following areas:

Construction Science and Technology
Construction and Project Management
Maintenance Management
Quantity Surveying

Gross annual emoluments range as follows:

Lecturer	\$530,880 - 63,570
Senior Lecturer	\$557,580 - 101,830
Associate Professor	\$589,300 - 123,000
STGC1 = \$52.70 approximately	

The commencing salary will depend on the candidate's qualifications, experience and the level of appointment offered.

Leave and medical benefits are provided. Under the University's Academic Staff Provident Fund Scheme, the staff member and the University are each required to contribute at the present rate of 25% of his salary, the contribution of the staff member and the University being subject to a maximum of \$1,250 per month and \$1,750 per month respectively. The sum standing to the staff member's credit in the Fund is tax-free and may be withdrawn when the staff member leaves Singapore/Malaysia permanently.

Depending on the type of contract offered, other benefits may include: a settling-in allowance of \$51,000 (single) or \$92,000 (married), subsidised housing at nominal rentals ranging from \$9100 to \$2816 p.a., education allowance for up to three children, subject to a maximum of \$10,000 per annum per child, passage assistance and baggage allowance for the transportation of personal effects to Singapore. Staff members may undertake consultation work, subject to the approval of the University, and retain consultation fees up to a maximum of 80% of their gross annual emoluments in any year.

Application forms and further information on terms and conditions of service may be obtained from:

The Director Personnel Department National University of Singapore Kent Ridge Singapore 0511	NUS Overseas Office c/o Singapore High Commission In London, 5 Chesham Street London SW1 U.K. Tel: (01) 235-4582
---	---

(70258)

UNIVERSITY OF MALAWI

STAFF VACANCIES: KAMUZU COLLEGE OF NURSING

Applications are invited from suitably qualified candidates for the following posts tenable from September/October 1988 - or as soon thereafter as possible - at Kamuzu College of Nursing, Lilongwe, a constituent College of the University of Malawi.

Assistant Lecturers/Lecturers/Senior Lecturers in Medical Surgical Nursing

The successful applicants will be required to teach courses in Clinical Nursing and Nursing Science in a programme leading to the award of a 3-year Diploma in Nursing, followed by a one-year Certificate in Midwifery.

Candidates must possess a good Bachelor's Degree in Nursing, plus preferably an MSc in an appropriate field, as well as teaching and/or clinical experience.

Assistant Lecturer/Lecturer/Senior Lecturer in Psychiatric Nursing

The successful applicant will be required to teach courses in Nursing and Clinical Science in a programme leading to the award of a 3-year Diploma in Nursing, followed by a one-year Certificate in Midwifery.

Candidates must have a good Bachelor's Degree in Nursing plus preferably an MSc in an appropriate field, as well as teaching and/or clinical experience.

Assistant Lecturer/Lecturer/Senior Lecturer in Biology

The successful applicant will be required to teach introductory courses in at least three of the following subjects: (1) Anatomy, (2) Physiology, (3) Microbiology, (4) Parasitology, and (5) Nutrition, in a programme leading to the award of a 3-year Diploma in Nursing, followed by a one-year Certificate in Midwifery.

Candidates must possess a good Honours Degree in either Biology or Zoology, plus preferably an MSc in an appropriate field, as well as some teaching experience.

Salary scales for non-domiciled staff (including expatriate addition), taxable in Malawi:

Assistant Lecturer	K 5,899 - K 6,174
Lecturer	K 6,070 - K 11,445
Senior Lecturer	K 10,882 - K 13,110

Family passages, various allowances, biennial overseas leave, and partly-furnished housing in Lilongwe, as well as a 15% tax-free gratuity for an initial contract of 22 months and 25% for 3-4 years.

Applications should reach the Registrar, University of Malawi, P.O. Box 278, Zomba, Malawi, as soon as possible, and not later than 7 June 1988, and should include a full curriculum vitae, as well as the names and addresses of three referees.

30 April 1988

Overseas continued

Swinburne

Principal Director

The Swinburne Council is seeking to make an appointment to the position of Principal Director from April 1988, on the retirement of the present incumbent, Dr W R Longworth.

Swinburne is a multi-level institution situated in Hawthorn, 7 km from the centre of Melbourne. It comprises the Swinburne Institute of Technology and the Swinburne College of Technical and Further Education. These teaching divisions are supported by an Educational Services Division and an Administrative Division.

The Institute has approximately 6000 students enrolled full-time and part-time in undergraduate and post-graduate courses in Applied Science, Art, Arts, Business and Engineering. The College of Technical and Further Education conducts courses in Building, Business, General Studies and Engineering, and has approximately 4000 students enrolled full-time and part-time in courses at the para-professional, technician and trade levels.

The Principal Director is the Chief Executive of the Institution and is responsible to Council, of which he/she is a member, for the conduct of the academic, administrative and financial business of the Institution. The salary for the position is determined by the Academic Salaries Tribunal and is currently A\$85,067 pa. There are associated benefits. The appointment may be on either a permanent or contract basis.

Persons interested in applying for the position, or anyone able to propose names for consideration, are invited to write in confidence to the President, Mr N P Watson. Applicants are asked to furnish a full curriculum vitae together with the names of three referees. Applications will close on the 12th July 1988. The Council reserves the right to accept applications at a later date or to fill the position by invitation. Further particulars of the appointment may be obtained from Mr P Hetherington, The Association of Commonwealth Universities, at the address below. Separate applications should be lodged simultaneously with The Association of Commonwealth Universities, and direct to Swinburne at the following addresses:

Mr N P Watson President of Council Swinburne Limited PO Box 218 Hawthorn Victoria 3122 AUSTRALIA	Mr P Hetherington The Association of Commonwealth Universities John Foster House 38 Gordon Square London WC1H 0PF ENGLAND UK
--	--

An Equal Opportunity Employer

UNIVERSITY OF QUEENSLAND

CHEMICAL/ ENVIRONMENTAL ENGINEERING

A 3 year postgraduate scholarship is offered for studies leading to a PhD in the field of water-pollution transport in groundwater systems. In particular studies are to be performed on the transport of contaminants in processed oil shale dumps. The candidate should have an honours degree in science, mathematics or engineering. Experience in one or more of the following areas would be an advantage:

- Numerical modelling of saturated and unsaturated flow systems using finite element techniques.
- Modelling of sorption phenomena (ion exchange, adsorption, desorption).
- Construction and/or operation of laboratory leaching columns and/or field leaching experiments.

STIPEND: An attractive tax-free stipend will be offered to the successful candidate. Some support for relocation and expenses will also be given.

For further enquiries contact R.F. Bell, Department of Chemical Engineering, University of Queensland, St. Lucia, 4077, Australia. Phone (07) 377 2008. Closing date: 7th June, 1988. Ref. 19485. (12615).

(70254)

PLEASE MENTION
THE T.H.E.S.
WHEN REPLYING
TO
ADVERTISEMENTS

UNIVERSITY OF NATAL
FACULTY OF ARTS
DURBAN

Applications are invited from suitably qualified persons regardless of sex, religion, race, colour or national origin for appointment as soon as possible, preferably by 1 January 1989, to the post of

PROFESSOR OF ZULU LANGUAGE AND LITERATURE

The appointee will preferably be one with senior academic qualifications in the field who combines a knowledge of modern theoretical developments in relation to African languages and to Zulu in particular. Practical experience of organising and teaching courses for both mother-tongue and non-mother-tongue speakers of Zulu would be a desirable additional qualification.

The appointment carries an attractive salary package, and the commencing salary will be determined according to the qualifications and/or experience of the successful applicant.

Application forms, further particulars of the post and information on pension, medical aid, group insurance, staff bursary, housing loan and salary advance schemes, long leave conditions and travelling expenses on first appointment are obtainable from the Secretary, South African Universities Office, Chichester House, 278 High Holborn, London WC1V 7HE or the Registrar, University of Natal, King George V Avenue, Durban, South Africa, 4001, with whom applications, on the prescribed form, must be lodged not later than 5 July 1988, quoting the reference D0885.

(70117)

UNITED STATES: Academic positions at universities, colleges and other institutions are regularly available in most subject areas in all parts of the United States. For information on subscriptions to a monthly Bulletin providing details on positions write to Overseas Academic Opportunities, 549 East 98th Street, New York, New York 10010, USA. (50414) R14

All

advertisements

are subject to

the conditions

of acceptance

of Times

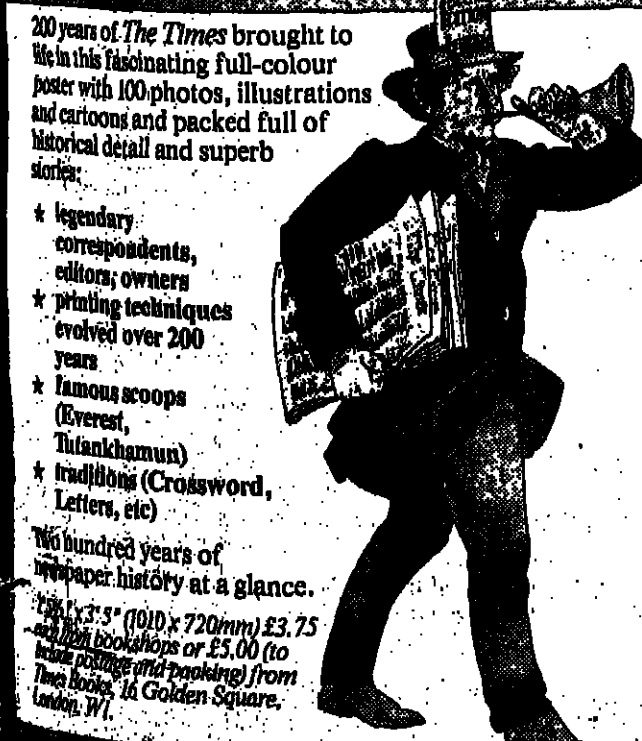
Newspapers Ltd,

copies of which

are available

on request.

Read all about it!



200 years of *The Times* brought to life in this fascinating full-colour poster with 100 photos, illustrations and cartoons and packed full of historical detail and superb stories.

- * Legendary correspondents, editors, owners
- * Printing techniques evolved over 200 years
- * Famous scoops (Everest, Titanic, moon)
- * Traditions (Crossword, Letters, etc)

Two hundred years of newspaper history at a glance.

114 x 33.5" (100 x 720mm) £3.75
- plus postage and packing (from
these books, 14 Golden Square,
London, W1)

WALLCHART ORDER FORM THE HISTORY OF THE TIMES WALLCHART 1785-1985

Each wallchart costs £3.75 each plus
6.00 p.p. and a cheque/PO for £.....
made to Times Books Ltd.

NAME (PRINTED).....
ADDRESS.....
CITY.....

TELEPHONE.....
CITY.....

SEND TO: TIMES BOOKS LTD, 14 Golden Square,
LONDON W1P 9PS and allow 21 days for delivery.